

Advanced Trauma Life Support  
for Doctors

ATLS

STUDENT COURSE MANUAL

American College of Surgeons Committee on Trauma

## Nagui Y. Hanna, MD

is recognized as having successfully completed the  
ATLS® Course for Doctors according to the standards  
established by the ACS Committee on Trauma.

*Karen Brusel* *Kimberly Joseph, MD*  
Karen Brusel, MD, FACS Kimberly Joseph, MD,  
FACS

Chairperson,  
ATLS Subcommittee

ACS Chairperson,  
State/Provincial  
Committee on Trauma

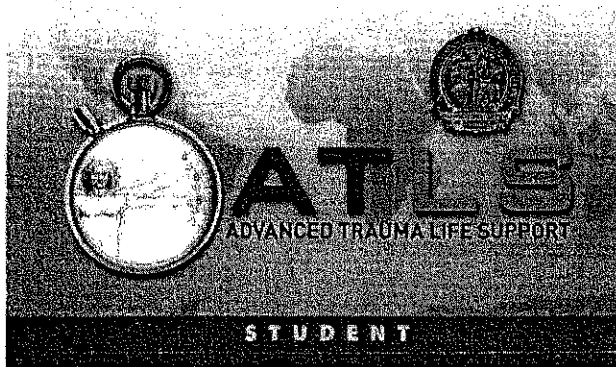
ATLS Course Director

Date of Issue: 06/09/2012

Date of Expiration: 06/09/2016



COMMITTEE ON TRAUMA



Nagui Y. Hanna, MD

is recognized as having successfully completed the  
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Issue Date: 06/09/2012

Expiration Date: 06/09/2016

*Karen Brusel*

*Kimberly Joseph, MD*

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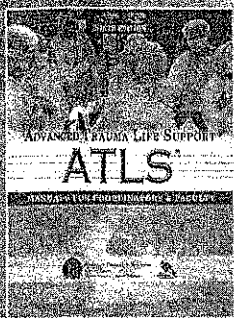
ACS Chairperson,  
State/Provincial  
Committee on Trauma

ATLS Course Director

CS: 39980-SR

ATLS II

Replacement ATLS cards are available for a \$10 USD fee.



## Rhonda Hercher

This Instructor is recognized as having completed the ATLS® Instructor Training requirements in an ATLS® Student Course according to the standards established by the ACS Committee on Trauma.

Sharon M. Henry, MD, FACS, Chair  
Chairperson,  
ATLS Subcommittee

Jonathan M. Saxe, MD, FACS  
ACS Chairperson,  
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Committee on Trauma

Date of Issue: 06/21/2014

Date of Expiration: 06/21/2018



AMERICAN COLLEGE  
OF SURGEONS

Ensuring Quality  
through Standards  
in Trauma Care



### Rhonda Hercher

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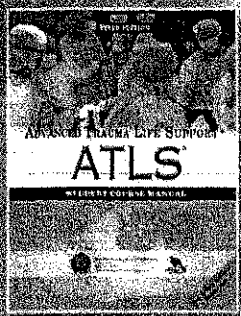
Issue Date: 06/21/2014

Expiration Date: 06/21/2018

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ATLS Subcommittee  
ATLS II

Jonathan M. Saxe, MD, FACS  
ACS Chairperson, State/Provincial  
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Ewa Kalinowska, MD

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Karen Brasel, MD, FACS Kimberly Joseph, MD,  
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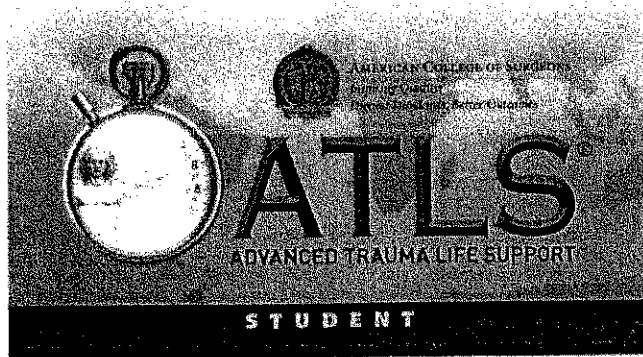
Improve Quality  
Improve Standards  
Improve Outcomes

Date of Issue: 02/22/2014

Date of Expiration: 02/22/2018



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Ewa Kalinowska, MD

is recognized as having successfully completed the  
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Issue Date: 02/22/2014

Expiration Date: 02/22/2018

*Karen Brasel*

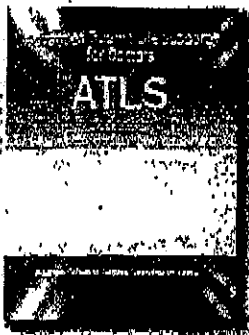
*Kimberly Joseph, MD*

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Committee on Trauma

CS: 44121-P Course-Director: ATLS

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Peter Kamhout, MD

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Karin Brasel, MD, FACS  
Chairperson,  
ATLS Subcommittee

Wayne Vanderkolk, MD  
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State/Provincial  
Committee on Trauma

*Wayne Vanderkolk*  
ATLS Course Director

Date of Issue: 02/08/2013

Date of Expiration: 02/08/2017



COMMITTEE ON TRAUMA



STUDENT

Peter Kamhout, MD

is recognized as having successfully completed the  
ATLS® Course for Doctors according to the standards  
established by the ACS Committee on Trauma.

Issue Date: 02/08/2013

Expiration Date: 02/08/2017

*Karin Brasel*

Wayne Vanderkolk, MD

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ATLS Subcommittee

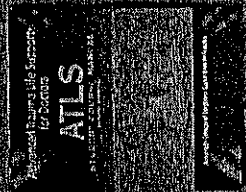
ACS Chairperson,  
State/Provincial  
Committee on Trauma

CS: 41591-F Course Director

ATLS ID: 1

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# Colin Kenny, DO

is recognized as having successfully completed the  
ATLS® Course for Doctors according to the standards  
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Chairperson,  
ATLS Subcommittee

*Joe H. (Pat) Patton, Jr.*  
Joe H. (Pat) Patton, Jr.,  
MD, FACS  
ACS Chairperson,  
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Committee on Trauma

*Colin Kenny*  
Colin Kenny, DO  
ATLS Course Director

Date of Issue: 10/19/2012

Date of Expiration: 10/19/2016



## Ryan Misek, DO

is recognized as having successfully completed the  
ATLS® Course for Doctors according to the standards  
established by the ACS Committee on Trauma.

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ATLS Course Director

Date of Issue: 07/11/2011

Date of Expiration: 07/11/2014



### ATLS Card ID:

I, Ryan Misek, DO, have successfully completed the  
ATLS® Course for Doctors according to the standards  
established by the ACS Committee on Trauma.  
Date: 07/11/2011

*Karen Brant, MD, FACS*

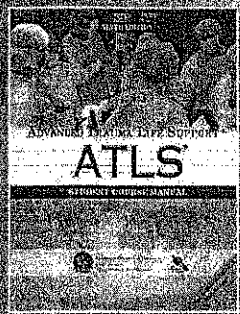
Chairperson  
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*Kimberly Bisset, MD, FACS*

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Committee on Trauma

ATLS Course Director

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## Lynette Oliver, MD

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Karen Brasel, MD, FACS

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*Jack Sava*  
Jack Sava, MD

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ATLS Course Director

Date of Issue: 03/22/2013

Date of Expiration: 03/22/2017



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Inspiring Quality  
Building Standards  
Better Outcomes



### Lynette Oliver, MD

is recognized as having successfully completed the  
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Issue Date: 03/22/2013

Expiration Date: 03/22/2017

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*Jack Sava*

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CS: 4F813-P/SR Course Director ATLS-ID

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Advanced Trauma Life Support  
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**ATLS**  
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**Elyas Parsa**

is recognized as having successfully completed the  
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Karen Brasel, MD, FACS

James W. Davis, MD,  
FACS

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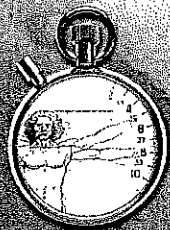
*John D. Bruckner, MD, FACS*  
ATLS Course Director

Date of Issue: 11/10/2012

Date of Expiration: 11/10/2016



COMMITTEE ON TRAUMA



**ATLS**  
ADVANCED TRAUMA LIFE SUPPORT

STUDENT

Elyas Parsa

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Issue Date: 11/10/2012

Expiration Date: 11/10/2016

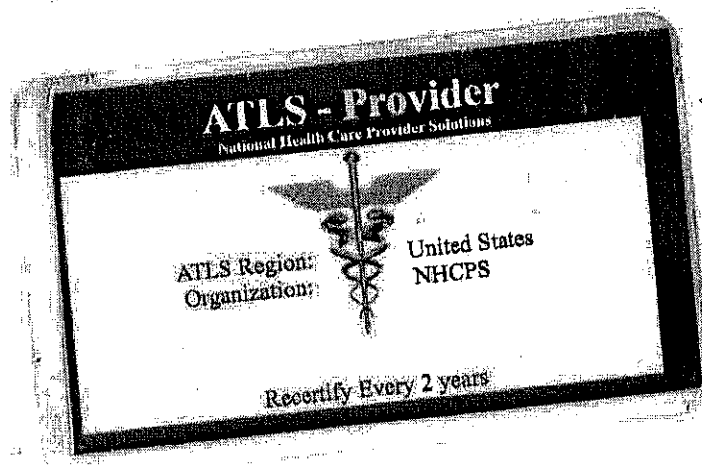
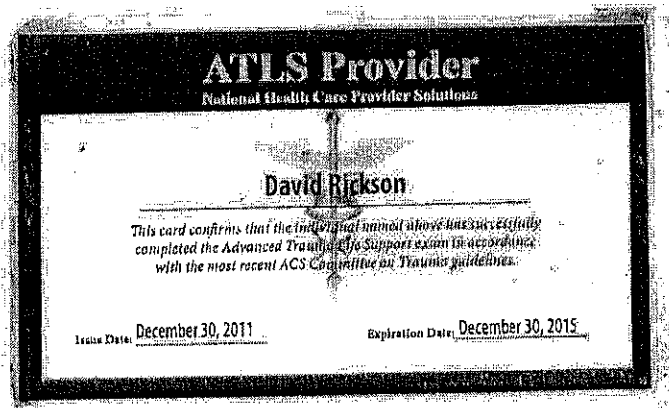
*Karen Brasel*

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ATLS Subcommittee

ACS Chairperson,  
State/Provincial  
Committee on Trauma

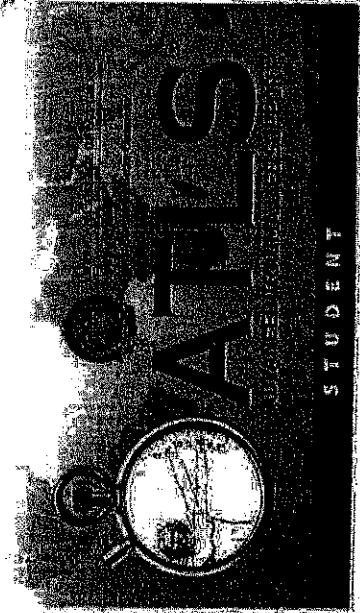
*John D. Bruckner, MD, FACS*  
CS: 39481-P Course Director AT

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COMMITTEE ON TRAUMA



Edward Sierra

is recognized as having successfully completed the  
ATLS® Course for Doctors according to the standards  
established by the ACS Committee on Trauma.

Issue Date: 11/14/2014

Expiration Date: 11/14/2018

*Signature*

Chairperson  
ATLS Subcommittee  
ACS Committee on State/Provincial  
Committee on Trauma

CS-4674-10-11 James Director ATLS II




**Martin F.B. Springer, MD**

is recognized as having successfully completed the  
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established by the ACS Committee on Trauma.

  
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Kimberly Joseph, MD,  
FACS

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Committee on Trauma

ATLS Course Director

Date of Issue: 02/09/2013

Date of Expiration: 02/09/2017

**Martin F.B. Springer, MD**

is recognized as having successfully completed the  
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Issue Date: 02/09/2013

Expiration Date: 02/09/2017



Chairperson,  
ATLS Subcommittee

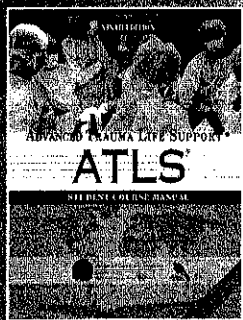


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CS: 41386-SR Course Director

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## Philip Tenbrink, MD

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Sharon M. Henry, MD, FACS,  
Chair

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ATLS Subcommittee

*Lewis E. Jacobson*  
Lewis E. Jacobson, MD,  
FACS

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Committee on Trauma

*Stephen A. Newberry*  
ATLS Course Director

Date of Issue: 11/06/2015

Date of Expiration: 11/06/2019



### Philip Tenbrink, MD

is recognized as having successfully completed the  
ATLS® Course for Doctors according to the standards  
established by the ACS Committee on Trauma.

Issue Date: 11/06/2015

Expiration Date: 11/06/2019

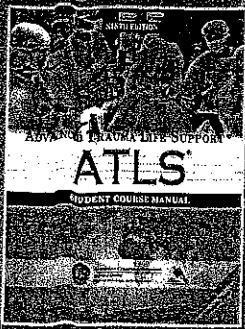
*Sharon M. Henry*  
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*Lewis E. Jacobson*  
ACS Chairperson, State/Provincial  
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CS 44984-P Course Director

ATLS

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## Anita Toussi MD

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*Karen Brasel*  
Karen Brasel, MD, FACS

*Lewis E. Jacobson*  
Lewis E. Jacobson, MD,  
FACS

*Neil B. Wilborn* MD FACS

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ATLS Subcommittee

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Committee on Trauma

ATLS Course Director

Date of Issue: 02/17/2013

Date of Expiration: 02/17/2017



### Anita Toussi MD

is recognized as having successfully completed the  
ATLS® Course for Doctors according to the standards  
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Issue Date: 02/17/2013

Expiration Date: 02/17/2017

*Karen Brasel*

*Lewis E. Jacobson*

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ATLS Subcommittee

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State/Provincial  
Committee on Trauma

*Neil B. Wilborn Jr* MD FACS

CS: 41298-P/SR Course Director

ATLS L...

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James A Turner, DO

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Karen Brasel, MD, FACS Lewis E. Jacobson, MD,  
FACS

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ACS Chairperson,  
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Committee on Trauma

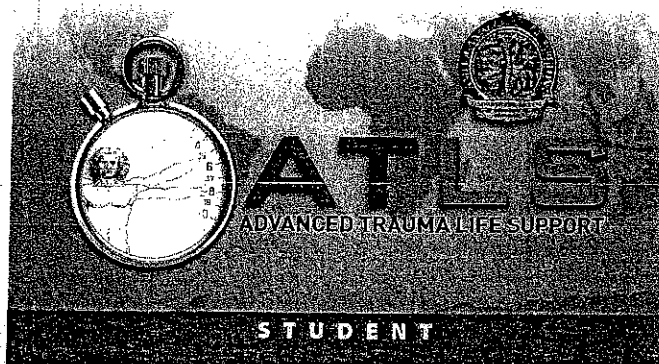
*Wiley*  
ATLS Course Director

Date of Issue: 02/19/2012

Date of Expiration: 02/19/2016



COMMITTEE ON TRAUMA



James A Turner, DO

is recognized as having successfully completed the  
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Expiration Date: 02/19/2016

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*Lewis E. Jacobson*

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ATLS Subcommittee

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State/Provincial  
Committee on Trauma

*Wiley*  
ATLS Course Director

CS: 39328-P/SR

ATLS ID

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UNION HOSPITAL, INC.  
TERRE HAUTE, INDIANA

**ORTHOPEDIC SURGERY SERVICE CALL SCHEDULE**

July 1, 2015 to December 31, 2015

	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1	Ulrich	Fern	Bavishi	Belmar	Fern	Ulrich
2	Jones	Fern	Ulrich	Jaafar	Jaafar	Jaafar
3	Jones	Jones	Jaafar	Jaafar	Bavishi	Bavishi
4	Jones	Bavishi	Fern	Jaafar	Ulrich	Fern
5	Jones	Ulrich	Fern	Fern	Belmar	Fern
6	Fern	Fern	Fern	Bavishi	Bavishi	Fern
7	Belmar	Bavishi	Fern	Ulrich	Bavishi	Belmar
8	Jones	Bavishi	Jaafar	Jaafar	Bavishi	Bavishi
9	Ulrich	Bavishi	Ulrich	Belmar	Fern	Fern
10	Jones	Ulrich	Belmar	Belmar	Belmar	Jaafar
11	Jones	Jones	Jaafar	Belmar	Ulrich	Bavishi
12	Jones	Fern	Jaafar	Fern	Jaafar	Bavishi
13	Ulrich	Fern	Jaafar	Belmar	Jaafar	Bavishi
14	Bavishi	Jones	Fern	Jaafar	Jaafar	Fern
15	Fern	Jones	Belmar	Bavishi	Jaafar	Jaafar
16	Jones	Jones	Bavishi	Fern	Ulrich	Belmar
17	Fern	Bavishi	Ulrich	Fern	Belmar	Ulrich
18	Fern	Jones	Fern	Fern	Jaafar	Fern
19	Fern	Belmar	Fern	Bavishi	Bavishi	Fern
20	Belmar	Ulrich	Fern	Ulrich	Fern	Fern
21	Ulrich	Fern	Jaafar	Belmar	Fern	Jaafar
22	Bavishi	Fern	Bavishi	Fern	Fern	Bavishi
23	Fern	Fern	Belmar	Jaafar	Jaafar	Ulrich
24	Belmar	Jones	Fern	Jaafar	Bavishi	Jaafar
25	Belmar	Ulrich	Bavishi	Jaafar	Ulrich	Jaafar
26	Belmar	Jaafar	Bavishi	Belmar	Ulrich	Jaafar
27	Bavishi	Bavishi	Bavishi	Fern	Belmar	Jaafar
28	Jones	Belmar	Ulrich	Jaafar	Belmar	Belmar
29	Fern	Belmar	Fern	Ulrich	Belmar	Bavishi
30	Belmar	Belmar	Jaafar	Fern	Fern	Jaafar
31	Fern	Fern	X	Fern	X	Belmar

Developed: 6/26/2015

Revised: 7/27/2015, 8/12/2015, 9/24/2015, 10/26/2015, 12/1/2015

UNION HOSPITAL, INC.  
TERRE HAUTE, INDIANA

**ORTHOPEDIC SURGERY SERVICE CALL SCHEDULE**

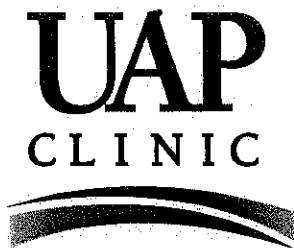
January 1, 2016 to January 31, 2016

	JANUARY					
1	Fern					
2	Fern					
3	Fern					
4	Belmar-Fern					
5	Bavishi					
6	Jaafar					
7	Belmar					
8	Fern					
9	Fern					
10	Fern					
11	Ulrich					
12	Jaafar					
13	Belmar					
14	Bavishi					
15	Jaafar					
16	Jaafar					
17	Jaafar					
18	Belmar					
19	Fern					
20	Bavishi					
21	Jaafar					
22	Fern					
23	Fern					
24	Fern					
25	Bavishi					
26	Belmar					
27	Fern					
28	Ulrich					
29	Bavishi					
30	Bavishi					
31	Bavishi					

Developed: 12/21/2015

Revised: 1/4/2016

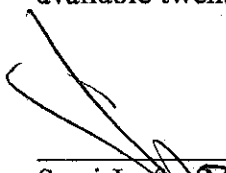





December 18, 2015

**Commitment of Orthopedic Surgeons**

UAP orthopedic surgeons are committed to providing care for the injured patient by ensuring an orthopedic surgeon is on call for Union Hospital Terre Haute and promptly available twenty four (24) hours a day.

  
\_\_\_\_\_  
Sami Jaafar, MD  
Orthopedic Surgeon  
\_\_\_\_\_  
Mark O. Lynch, MD, FACS  
Trauma Medical Director

**BONE & JOINT CENTER**  
1725 N. Fifth St.  
Terre Haute, IN 47804

**Hand & Upper Extremity**  
PH: 812.242.3005  
FAX: 812.242.3056

**Orthopaedics**  
PH: 812.242.3005  
FAX: 812.242.3054

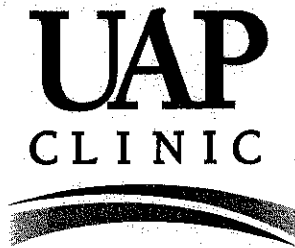
**Podiatry**  
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FAX: 812.242.3056

**Rheumatology**  
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FAX: 812.242.3053

**Sports Medicine**  
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FAX: 812.242.3034

**MRI**  
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December 18, 2015

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Gary Ulrich, DO  
Orthopedic Surgeon

Mark O. Lynch, MD, FACS  
Trauma Medical Director

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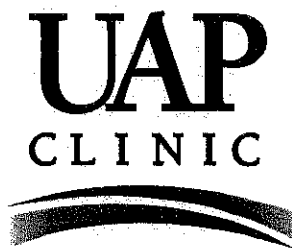
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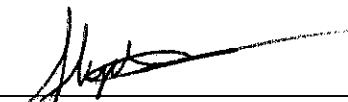
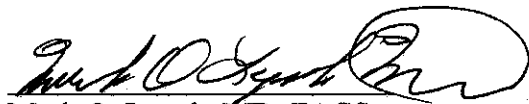
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\_\_\_\_\_  
Stephen Fern, MD  
Orthopedic Surgeon  
\_\_\_\_\_  
Mark O. Lynch, MD, FACS  
Trauma Medical Director

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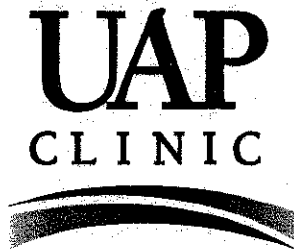
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Sameer Bavishi, MD  
Orthopedic Surgeon

Mark O. Lynch, MD, FACS  
Trauma Medical Director

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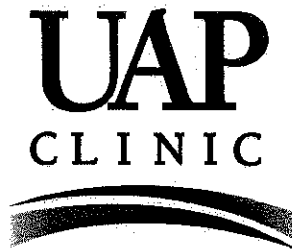
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Carlos Belmar, MD  
Orthopedic Surgeon

Mark O. Lynch, MD, FACS  
Trauma Medical Director

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**Hand & Upper Extremity**

PH: 812.242.3005  
FAX: 812.242.3056

**Orthopaedics**

PH: 812.242.3005  
FAX: 812.242.3054

**Podiatry**

PH: 812.242.3005  
FAX: 812.242.3056

**Rheumatology**

PH: 812.242.3005  
FAX: 812.242.3053

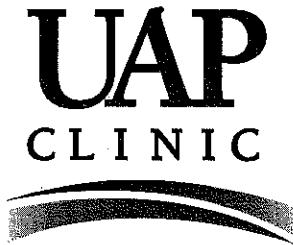
**Sports Medicine**

PH: 812.242.3005  
FAX: 812.242.3034

**MRI**

PH: 812.242.3015  
FAX: 812.242.3087

uapclinic.com



November 11, 2015

**Commitment of Orthopedic Surgeons**

UAP orthopedic surgeons are committed to providing care for the injured patient by ensuring an orthopedic surgeon is on call for Union Hospital Terre Haute and promptly available twenty four (24) hours a day.

Gary Ulrich, DO  
Orthopedic Surgeon

Carlos Belmar, MD  
Orthopedic Surgeon

Sameer Bavishi, MD  
Orthopedic Surgeon

Stephen Fern Jr., MD  
Orthopedic Surgeon

  
Sami Jaafar, MD  
Orthopedic Surgeon  
Trauma Liaison

**BONE & JOINT CENTER**  
1725 N. Fifth St.  
Terre Haute, IN 47804

**Hand & Upper Extremity**  
PH: 812.242.3005  
FAX: 812.242.3056

**Orthopaedics**  
PH: 812.242.3005  
FAX: 812.242.3054

**Podiatry**  
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**MRI**  
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uapclinic.com

  
Mark O. Lynch, MD, FACS  
Trauma Medical Director



UNION HOSPITAL, INC.  
Terre Haute, Indiana  
Emergency Department

POLICY NUMBER: ES. 710.142

Page:

Approved: 7/14

**SUBJECT:** Neuro-Trauma Admission & Transfer Guidelines

**POLICY:** To provide uniform and effective guidelines for severely injured neuro-trauma patients for neurosurgical assessment and treatment or for who transfer to a Level I or II Trauma Center should be immediately considered.

**PURPOSE:** To expedite the timely transfer of appropriate patients to the closest Level I or Level II Trauma Center, this is the specialty referral center for these injuries. Patients who are under 15 years of age should be transported to a pediatric trauma center.

**GUIDELINES:**

A severely injured neurotrauma patient will be defined as a patient that exhibits one or more of the following indications.

**INDICATIONS FOR HEAD INJURY TRANSFER**

Presence of any one symptom below:

1. Patients with focal or lateralizing signs, such as hemiparesis or posturing due to trauma.
2. Patients with penetrating cranial injury, including gunshot wounds or depressed skull fractures
3. GCS equal to or less than 8 with head injury.
4. Hemodynamic instability (SBP less than 90 with head injury)
5. Hypoxia (apnea or cyanosis in the field, PaO2 less than 60 with head injury)

**INDICATIONS FOR SPINE INJURY TRANSFER**

Presence of any one symptom below:

1. Patients with suspected spinal injury, evidence of paresthesia or paralysis.
2. Patients with possible spinal fractures or dislocations that are unstable or need stability evaluation
3. Patients with penetrating spinal injury, including gunshot or stab wounds

POLICY NUMBER: ES. 710.142

Page:

## **PROCEDURE:**

### Before patient arrival:

1. After becoming aware that a trauma patient is en route who has sustained a likely head or spine injury, the emergency department staff verifies whether there is neurosurgical (NUS) coverage available.

### After patient arrival:

1. The emergency physician completes primary survey, upon determination of possible head or spinal injury, the physician will:
  - If NUS available, call the neurosurgeon on call.
  - If no NUS coverage, promptly contact an accepting Level I or II Trauma Center for neuro-trauma transfer.
2. Upon acceptance of transfer, the emergency physician will consider:
  - Ensure chest tubes are placed in the presence of pneumothorax.
  - Ensure at least two IV lines are established.
  - Consider securing the airway with an endotracheal tube, LMA or surgical airway if GCS <11.
  - Any other life saving measure.
  - Consider sending additional blood, equipment and supplies (medications, fluids, etc.) that the patient may need en route if not available in the transporting vehicle.
3. The transfer will be completed in compliance with the Emergency Medical Treatment and Active Labor Act (EMTALA), refer to policy ES 710.23 Transfer of Patients.
4. Copies of all available documentation should accompany the patient including but not limited to: X-ray & CT scans/results, lab results, provider documentation, and transfer forms.

## **References:**

Resources for Optimal Care of the Injured Patient, American College of Surgeons, Chapter 8, Page 1-5, 2014

POLICY NUMBER: ES. 710.142

Page:

Signatures:

Rhonda Smith RN, MST

Rhonda Smith, VP of Patient Care

A. Touss

A. Toussi MD, FACEP, MBA, CPE Medical Director

David A. Southwick DO 7-2014

David A. Southwick DO, Chief of Staff

Mark O. Lynch MD FACS

Mark O. Lynch, MD FACS  
Trauma Medical Director

Reviewed and Approved 09/29/2015

UNION HOSPITAL, INC.  
TERRE HAUTE, INDIANA

**NEUROSURGERY SERVICE CALL SCHEDULE**

August 1, 2015 to October 31, 2015

	AUGUST	SEPTEMBER	OCTOBER
1	Stephanian		
2	Stephanian		
3	Stephanian		
4	Stephanian		Narotam
5	Narotam		Narotam
6	Narotam		Narotam
7	Narotam		Narotam
8		Stephanian	Stephanian
9		Stephanian	Stephanian
10		Stephanian	Stephanian
11		Stephanian	Stephanian
12		Stephanian	Stephanian
13		Stephanian	Stephanian
14		Stephanian	Stephanian
15		Stephanian	
16		Stephanian	
17		Stephanian	
18			
19			
20	Narotam		
21	Narotam		
22	Narotam		Stephanian
23	Narotam		
24	Stephanian	Narotam	
25	Stephanian	Narotam	
26	Stephanian	Narotam	
27		Narotam	
28		Narotam	Narotam
29		Narotam	Narotam
30		Narotam	Narotam
31		x	

Developed: 6/30/2015

Revised: 9/2/2015, 10/5/2015

UNION HOSPITAL, INC.  
TERRE HAUTE, INDIANA

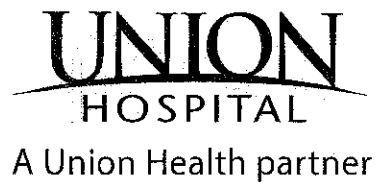
**NEUROSURGERY SERVICE CALL SCHEDULE**

November 1, 2015 to January 31, 2016

	NOVEMBER	DECEMBER	JANUARY
1	Stephanian	Narotam	
2		Narotam	
3		Narotam	
4		Narotam	
5		Narotam	Stephanian
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24			Narotam
25			Stephanian
26			
27			
28			
29			
30	Narotam		
31	X		

Developed: 9/24/2015

Revised: 10/20/2015, 11/6/2015, 11/13/2015



### Commitment of Neurosurgery

The Neurosurgeons are committed to providing care for the injured patient. Our scope of practice will include brain and spinal injury conducive to our level of comfort, provided a neurosurgeon is available on call. All other injuries will fall under our transfer policy.

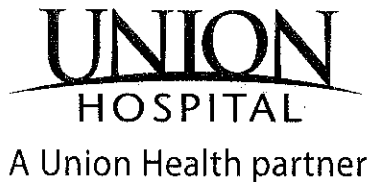
Erick Stephanian MD

Neurosurgeon

Mark O. Lynch MD FACS

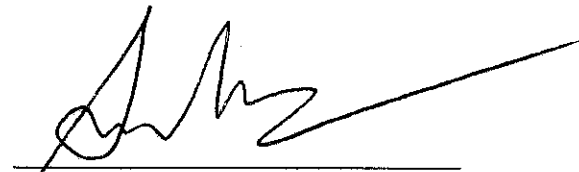
Trauma Medical Director





### Commitment of Neurosurgery

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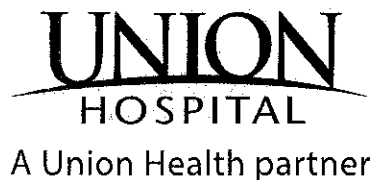
Pardeep Narotam MD

Neurosurgeon



Mark O. Lynch MD FACS

Trauma Medical Director



### Operating Room, Staff, & Equipment List

Union Hospital, Inc. Terre Haute is committed to providing care to the injured patient by providing staff available twenty four (24) hours a day. A call team is available within a 30 minute maximum response time. Anesthesiology services are available twenty four hours (24) a day with a 30 minute maximum response time.

- OR is staffed 16 hours a day Monday through Friday in house, on call 8 hours
- Saturdays and Sundays OR is staffed 8 hours, on call 16 hours
- Anesthesia is on call with 1<sup>st</sup> and 2<sup>nd</sup> on call 24 hours a day

The following equipment is available in the OR.

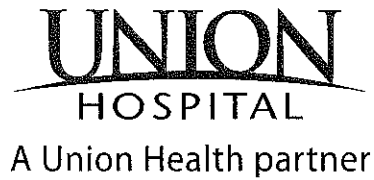
- Hotline Fluid Warmers
- Level 1 Rapid Infusers
- Bair Huggers
- Anesthesia Carts
- Suction system that holds over 20 liters of fluid
- Craniotomy instruments
- Stryker spinal drills
- Mayfield head positioning devices for craniotomy
- Emergency case carts for exploratory laparotomy, AAA/Chest, and a diagnostic laparoscopy.
- Rolling Carts with chest instrumentation, invasive lines, cardiovascular instruments and supplies.
- Capabilities for hemodynamic monitoring through standard and arterial lines.
- Intraoperative radiologic capabilities
- Equipment for fracture fixation
- Bronchoscopy, endoscopy equipment
- Set up for open heart /chest cases

Linda Starkey RN MSN CNOR

System Director Surgical Services

Mark O. Lynch MD FACS

Trauma Medical Director



### Commitment of Neurosurgery

The Neurosurgeons are committed to providing care for the injured patient. Our scope of practice will include brain and spinal injury conducive to our level of comfort, provided a neurosurgeon is available on call. All other injuries will fall under our transfer policy.

Erick Stephanian MD

Neurosurgeon

Pardeep Narotam MD

Neurosurgeon

Mark O. Lynch MD FACS

Trauma Medical Director

## UNION HOSPITAL TRAUMA PRACTICE GUIDELINE

### TITLE: TRAUMATIC BRAIN INJURY GUIDELINE

**OBJECTIVE:** To provide practice management guidelines for traumatic brain injury patients based upon the National Brain Trauma Foundation Guidelines.

1. Early diagnosis and management of severe traumatic brain injury.
2. Prevent causes of secondary brain injury during resuscitation (hypoxia, hypovolemia, hypocarbia, anemia, hyperthermia, hypo/hyperglycemia.)
3. To rapidly identify and treat mass lesions.
4. Indications for ICP/CPP monitoring and management of intracranial hypertension (ICH.)

#### DEFINITIONS:

- Mild head injury: Glasgow Coma Scale\* (GCS) score 13-15
- Moderate head injury: GCS 9-12
- Severe head injury: GCS 3-8

\*After adequate cardiopulmonary resuscitation.

#### GUIDELINES:

##### A. Initial management

1. Primary and secondary survey as outlined in resuscitation section above.
2. Establish level of consciousness and any focal neurologic deficits.
3. Airway:
  - a. Intubate all unconscious patients (GCS < 8) to secure airway. Use sedation and short acting neuromuscular blockade if necessary.
  - b. Maintain cervical spine immobilization in all unconscious or symptomatic (neck pain or tenderness) patients.
4. Breathing: Oxygenation and ventilation.
  - a. Administer high flow oxygen to all patients with suspected head injury.
  - b. Monitor oxygen saturation.
    - i. Avoid hypoxia ( $\text{SaO}_2 < 90\%$  or  $\text{PaO}_2 < 60 \text{ mmHg}$ .)
  - c. Ventilation.
    - i. Avoid hyperventilation; unless signs of herniation are present (see below.)
    - ii. Maintain  $\text{PaCO}_2$  35-40 mmHg.
5. Circulation:
  - a. Prehospital: avoid SBP < 90 mmHg.
  - b. Resuscitate to goal of mean arterial pressure (MAP) > 90 mmHg to maintain a presumptive cerebral perfusion pressure (CPP) > 60 mmHg.
  - c. Fluids: infuse 0.9% NaCl and/or blood.
6. Recognize and treat herniation syndromes.
  - a. Signs:

- i. Pupils: Anisocoria (asymmetric,) irregular, or sluggish reaction, progressing to fixed, dilated, nonreactive.
      - ii. Motor: hemiparesis, decerebrate posturing, Babinski reflex.
      - iii. Progressive neurologic deterioration, not attributable to extracranial causes.
    - b. Emergency treatment of herniation:
      - i. Hyperventilation.
      - ii. Mannitol, if not hypotensive.
    - c. In the absence of a herniation syndrome, do not initiate treatment for intracranial hypertension, until CT scan is done.
  - 7. Manage all wounds in a sterile manner.
  - 8. Indications for head CT scan (without IV contrast):
    - a. Unconscious.
    - b. History of loss of consciousness.
    - c. Focal neurologic deficits.
    - d. Post-traumatic seizure.
    - e. Decreasing level of consciousness.
    - f. Penetrating injury.
    - g. Skull fracture.
  - 9. Indications for neurosurgery consultation:
    - a. Moderate or severe head injury: GCS<13.
    - b. Post-traumatic seizure.
    - c. Unequal pupils.
    - d. Neurologic deficit.
    - e. Abnormal head CT scan:
      - i. Hematoma.
      - ii. Contusion.
      - iii. Edema.
      - iv. Compressed basal cisterns.
      - v. Fracture.
- B. Intracranial pressure (ICP) and cerebral perfusion pressure (CPP) monitoring.
- 1. Need for ICP/CPP monitoring will be determined by the neurosurgery physician.  
General indications:
    - a. Severe head injury (GCS 3-8 after resuscitation and considering presence of paralytics and sedatives) + abnormal CT scan.
    - b. Inability to monitor neuro exam: prolonged sedation or anesthesia.
  - 2. Brain Trauma Foundation provides Level III evidence for placement of ICP monitoring device in the following patient type:
    - a. Severe head injury + normal CT scan and at least 2 of the following 3:
      - i. Age>40.
      - ii. Unilateral or bilateral posturing.
      - iii. SBP<90 mmHg.
  - 3. Technique:
    - a. ICP: Parenchymal ICP monitoring catheter (Camino) or ventricular catheter.
    - b. CPP: Arterial line needed for continuous monitoring

- i.  $CPP = \text{mean arterial pressure(MAP)} - ICP$

C. ICP/ CPP treatment

1. Parameters:
  - a. Normal ICP = 0-10 mmHg.
  - b. Treatment threshold > 20-25 mmHg.
  - c. Goal CPP = 60-70 mmHg.
2. Mannitol.
  - a. Initial evaluation: Use mannitol without ICP monitoring *only if* signs of herniation or progressive neurologic deterioration, not attributable to extracranial causes, are present.
  - b. For treatment of intracranial hypertension:
    - i. Effective doses range from 0.25-1 gram/kg, given by intermittent bolus infusion Q 4-6 hrs.
    - ii. Euvolemia must be maintained. Foley mandatory. CVP monitor recommended.
    - iii. Monitor serum osmolality. Do not exceed 320 mOsm/kg.
3. Barbiturates.
  - a. High dose barbiturates may be considered for hemodynamically stable, salvageable, severe head injury patients with intracranial hypertension refractory to maximal medical and surgical therapy.
4. Steroids.
  - a. Steroids should not be used in patients with severe head injury.
5. Head of Bed. Elevate at 30 degrees to improve cerebral venous outflow.

D. Early post-traumatic seizure prophylaxis (7 days):

1. Phenytoin(Dilantin) should be considered in the following patients:
  - a. Glasgow coma scale score < 10.
  - b. Cortical contusion.
  - c. Depressed skull fracture.
  - d. Subdural hematoma.
  - e. Epidural hematoma.
  - f. Temporal lobe contusions.
  - g. Penetrating head wound.
  - h. Seizure within 24 hrs. of injury.
2. Therapy should be considered for 7 days.

E. Nutritional support.

1. Nutrition should begin as early as the patient is hemodynamically stable, ideally within 24-48 hours of injury.
2. Enteral feeds should be instituted within 72 hours of injury.
3. Consult Dietician for feeding recommendations

References:

1. Brain Trauma Foundation, Inc. Guidelines for the Management of Severe Traumatic Brain Injury. 2007. <http://www.braintrauma.org> (accessed 08/31/2015)
2. ACS TQIP Best Practices in the Management of Traumatic Brain Injury, 2015.

REVIEWED DATE	REVISED DATE
9/3/2015 Trauma Peer & TOPPI	





UNION HOSPITAL, INC.  
Terre Haute, Indiana  
Emergency Department

POLICY NUMBER: ES. 710.141

Page

Approved: 7/14

**SUBJECT:** Trauma Transfer Out of Union Hospital, Inc.

**POLICY:** To provide guidelines for identifying trauma patients for who transfer to a Level I or II Trauma Center should be immediately considered.

**PURPOSE:** Trauma patients who will be transferred out of this facility to a definitive care facility emergently must be identified early, assessed and treated quickly and transferred efficiently in order to provide them the best possible outcome.

**GUIDELINES:** The following are conditions that should be immediately considered for emergency transfer to a Level I or II Trauma Center:

- Head/Central Nervous System
  - Penetrating injury or open fracture of the skull
  - Depressed skull fracture
  - GCS <11 or deteriorating mental status or lateralizing neurological signs
  - Spinal cord injury or major vertebral injury
- Face
  - Ocular, Maxillofacial injury requiring OMF or plastic surgeon consult
- Chest
  - Significant torso injury
  - Wide mediastinum or other signs suggesting great vessel injury
  - Cardiac injury
- Pelvis/Abdomen
  - Unstable Pelvic fracture requiring transfusion of more than 6 U of red blood cells in 6 hours
  - Complex pelvis/acetabulum fractures
  - Major abdominal vascular injury
  - Grade IV or V Liver injuries requiring transfusion of more than 6 U of red blood cells in 6 hours
- Major Extremity Injuries
  - Fracture or dislocation with loss of distal pulses
  - Hand Injury when no hand surgery on call coverage
- Multiple-System Injury
  - Head injury combined with face, chest, abdominal, or pelvic injury
  - Burns with associated injuries

- Pediatric Trauma – Pediatric patients <15 years who are at risk for rapid deterioration and/or may require early operation should be considered for expeditious transfer to a pediatric trauma center.
- OB Trauma-≥20 weeks
  - MVC with major impact
  - Maternal vital signs unstable
  - Visible major injury
  - Mother is unresponsive

**PROCEDURE:**

Before patient arrival:

1. After becoming aware that a trauma patient is en route who likely will require emergent transfer, the emergency department staff activates the trauma team and notifies the emergency department physician.
2. The physician identifies the appropriate mode of transfer (i.e., air medical vs. ground) and qualifications of transferring personnel.
3. Unit Secretary contacts the appropriate air medical service and ascertains weather conditions and ability to fly.

After patient arrival and assessment:

1. After assessment of patient, the physician confirms conditions necessitating need for transfer.
2. The physician identifies and contacts the appropriate receiving facility, and requests the receiving physician to accept the transfer. The two should discuss the current physiological status of the patient, current treatments, the optimal timing, and mode of transfer.
3. Before transfer, the physician should:
  - Ensure chest tubes are placed in the presence of pneumothorax.
  - Ensure at least two IV lines are established.
  - Consider securing the airway with an endotracheal tube, LMA or surgical airway if GCS <11.
  - Any other life saving measures.
  - Consider sending additional blood, equipment and supplies (medications, fluids, etc.) that the patient may need en route if not available in the transporting vehicle.
4. The transfer will be completed in compliance with the Emergency Medical Treatment and Active Labor Act (EMTALA), refer to policy ES 710.23 Transfer of Patients.
5. Copies of all available documentation should accompany the patient including but not limited to: X-ray & CT scans/results, lab results, provider documentation, and transfer forms.

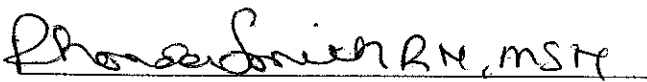
POLICY NUMBER: ES. 710.141

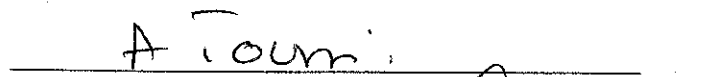
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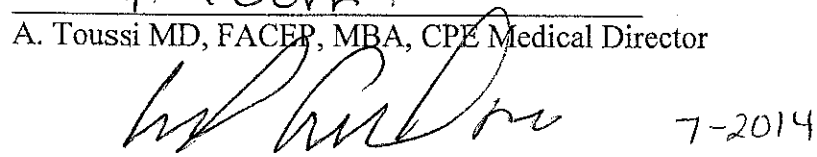
**REFERENCES:**

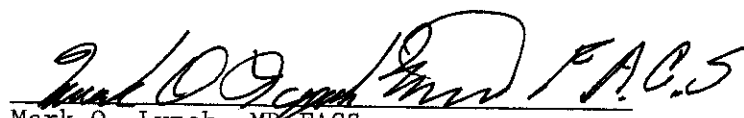
Resources for Optimal Care of the Injured Patient, American College of Surgeons, Chapter 4,  
Page 1-4, 2014

Signatures:

  
Rhonda Smith, VP of Patient Care

  
A. Toussi MD, FACEP, MBA, CPE Medical Director

  
David A. Southwick DO, Chief of Staff

  
Mark O. Lynch, MD FACS  
Trauma Medical Director  
Reviewed and Approved 09/29/2015

**TRANSFER AGREEMENT  
BETWEEN  
UNION HOSPITAL  
AND  
INDIANA UNIVERSITY HEALTH, INC.**

**THIS AGREEMENT** is entered into, by and between Union Hospital, Inc., an Indiana hospital (hereinafter "HOSPITAL"), and Indiana University Health, Inc., an Indiana nonprofit corporation (hereinafter "IU Health").

**WHEREAS**, HOSPITAL is the owner and operator of a hospital with facilities located at 1606 North 7th Street, Terre Haute, Indiana 47804;

**WHEREAS**, the IU Health Academic Health Center in Indianapolis, Indiana includes IU Methodist Hospital, Riley Hospital for Children and IU University Hospital, a Level I adult trauma center at IU Methodist Hospital, a Level I pediatric trauma center at Riley Hospital, specialized research and teaching institutions, physician group practices and clinics, and other organizations related to the delivery and management of health care services; and

**WHEREAS**, HOSPITAL wishes to maintain a written agreement with IU Health for timely transfer of patients, including trauma patients, between their facilities;

**NOW THEREFORE**, in consideration of the mutual covenants contained herein, the parties agree as follows:

- I. Autonomy. The parties agree that each shall continue to have the exclusive control of the management, business and properties of their respective facilities, and neither party by virtue of this Agreement assumes any liability for any debts or obligations of the other party to the Agreement.
- II. Transfer of Patients. Whenever a transfer of a patient from HOSPITAL to IU Health is determined by medical staff at HOSPITAL to be medically necessary and appropriate, HOSPITAL shall notify IU Health of the proposed transfer request and provide such medical and personal patient information as necessary and appropriate to assist IU Health in evaluating and assuming the medical care of the patient upon patient's arrival. IU Health and HOSPITAL shall develop and adhere to any necessary protocols to facilitate such communication and transfer. HOSPITAL shall give notice to IU Health as far in advance as reasonably possible of a proposed transfer. HOSPITAL shall arrange for transportation of the patient. IU Health shall not be responsible for the notification and the safe transfer of the patient to the applicable IU Health facility except to the extent that IU Health is actually involved in providing the transport service.
- III. Admission Priorities. Admissions to IU Health shall be in accordance with IU Health's general admission policies and procedures and in accordance with IU Health's Medical Staff Bylaws and Rules and Regulations. IU Health is not required to give priority of admission to patients to be transferred from

HOSPITAL over patients from other transferring facilities. IU Health reserves the right to decline acceptance of a HOSPITAL patient transfer if IU Health is on diversion or otherwise does not have appropriate, available resources to treat the patient.

- IV. Medicare Participation. During the term of this Agreement, and any extensions thereof, HOSPITAL and IU Health agree to meet and maintain all necessary Medicare Conditions of Participation and coverage so as to remain approved providers thereunder. HOSPITAL and IU Health shall each be responsible for complying with all applicable federal and state laws.
- V. Compliance. HOSPITAL and IU Health agree that any services provided under this Agreement will comply in all material respects with all federal and state mandated regulations, rules or orders applicable to IU Health and/or HOSPITAL, including, but not limited, to regulations promulgated under Title II, Subtitle F of the Health Insurance Portability and Accountability Act (Public Law 104-91) - "HIPAA" and Title XVIII, Part D of the Social Security Act (42 U.S.C. § 1395dd) - "EMTALA". Furthermore, HOSPITAL and IU Health shall promptly amend the Agreement to conform with any new or revised legislation, rules and regulations to which HOSPITAL and/or IU Health is subject now or in the future including, without limitation, the Standards of Privacy of Individually Identifiable Health Information or similar legislation (collectively, "Laws") in order to ensure that HOSPITAL and IU Health are at all times in conformance with all Laws. If, within ninety (90) days of either party first providing notice to the other of the need to amend the Agreement to comply with Laws, the parties acting in good faith, are (i) unable to mutually agree upon and make amendments or alterations to this Agreement to meet the requirements in question, or (ii) alternatively, the parties determine in good faith that amendments or alterations to the requirements are not feasible, then either party may terminate this Agreement immediately.
- VI. Interchange of Information and Medical Records. HOSPITAL and IU Health agree to transfer medical and other information and medical records which may be necessary or useful in the care and treatment of patients transferred hereunder as required and permitted by all applicable federal and state laws. Such information shall be provided by HOSPITAL and IU Health in advance, when possible, and where permitted by applicable law. HOSPITAL shall commit to subscribing to a spoke connection to the IU Health Radiology Cloud in order to enhance the timely transmission and reading of diagnostic images at IU Health for transferred patients, particularly trauma patients.
- VII. Consent to Medical Treatment. To the extent available, HOSPITAL agrees to provide IU Health with information and assistance, which may be needed by, or helpful to, IU Health in securing consent for medical treatment for the patient.
- VIII. Transfer of Personal Effects and Valuables. Procedures for effecting the transfer of personal effects and valuables of patients shall be developed by the parties and subject to the instructions of the attending physician and of the patient and his or

her family where appropriate. A standard form shall be adopted and used for documenting the transfer of the patient's personal effects and valuables. HOSPITAL shall be responsible for all personal effects and valuables until such time as possession is accepted by IU Health.

IX. Financial Arrangements. Each party shall each be responsible for billing and collecting for the services which it provides to the patient transferred hereunder from the patient, third party payor or other sources normally billed by each institution. Neither party shall assume any liability by virtue of this Agreement for any debts or other obligations incurred by the other party to this Agreement.

X. Return Transfer of Patients. HOSPITAL will accept transferred patients back from IU Health when medically appropriate and in the best interests of the patient.

XI. Professional and General Liability Coverage. Throughout the term of this Agreement and for any extension(s) thereof, HOSPITAL and IU Health shall each maintain professional and general liability insurance coverage with limits reasonably acceptable to the other party. Each party shall provide the other party with proof of such coverage upon request. HOSPITAL and IU Health shall each maintain qualification as a qualified health care provider under the Indiana Medical Malpractice Act, as amended from time to time, including, but not limited to, proof of financial responsibility and payment of surcharge assessed on all health care providers. Each party shall provide the other party with proof of such qualification upon request.

XII. Indemnification.

12.1. HOSPITAL Indemnification. HOSPITAL agrees that it will indemnify and hold harmless IU Health, its officers, agents, and employees from any loss, cost, damage, expense, attorney's fees, and liability by reason of bodily injury, property damage, or both of whatsoever nature or kind, arising out of or as a result of the sole negligent act or negligent failure to act of HOSPITAL or any of its agents or employees.

12.2. IU Health Indemnification. IU Health agrees that it will indemnify and hold harmless HOSPITAL, its officers, agents, and employees from any loss, cost, damage, expense, attorney's fees, and liability by reason of personal injury or property damage of whatsoever nature or kind, arising out of or as a result of the sole negligent act or failure to act of IU Health or any of its employees or agents.

XIII. Term and Termination.

13.1. Term. The term of this Agreement is for a period of one (1) year from the date hereof, with an automatic renewal of successive one (1) year periods unless on or before sixty (60) calendar days prior to the expiration of the annual term, one party notifies the other, in writing, that the Agreement is

not to be renewed, in which event the Agreement will be terminated at the expiration of the then current annual term.

13.2. Termination.

13.2-1 Either party may terminate this Agreement with or without cause at any time by providing written notice to the other party at least sixty (60) days in advance of the desired termination date.

13.2-2 The Agreement shall terminate immediately and automatically if (i) either IU Health or HOSPITAL has any license revoked, suspended, or nonrenewed; or (ii) either party's agreement with the Secretary of Health and Human Services under the Medicare Act is terminated.

13.2-3 Except as provided for elsewhere in this Agreement, either party may declare this Agreement terminated if the other party does not cure a default or breach of this Agreement within thirty (30) calendar days after receipt by the breaching party of written notice thereof from the other party.

XIV. Notices. Notices or communication herein required or permitted shall be given the respective parties by registered or certified mail, documented courier service delivery or by hand delivery at the following addresses unless either party shall otherwise designate its new address by written notice:

HOSPITAL

Union Hospital, Inc.  
1606 North 7th Street  
Terre Haute, IN 47804

Attention: President/CEO

IU Health

Indiana University Health, Inc.  
340 West 10<sup>th</sup> Street, Suite 6100  
Indianapolis, IN 46206-1367

Attention: President/CEO  
General Counsel

XV. Assignment. Assignments of this Agreement or the rights or obligations hereunder shall be invalid without the specific written consent of the other party herein.

XVI. Nonexclusive Clause. This is not an exclusive Agreement and either party may contract with other institutions for the transfer of patients while this Agreement is in effect.

XVII. Governing Law. This Agreement shall be construed and governed by the laws of the State of Indiana. The venue for any disputes arising out of this Agreement shall be Marion County, Indiana.

XVIII. Waiver. The failure of either party to insist in any one or more instance upon the strict performance of any of the terms or provisions of this Agreement by the other party shall not be construed as a waiver or relinquishment for the future of any such term or provision, but the same shall continue in full force and effect.

XIX. Severability. If any provision of this Agreement is held by a court of competent jurisdiction to be unenforceable, invalid or illegal, such unenforceability, invalidity or illegality shall not affect any other provision hereof, and this Agreement shall be construed as if such provision had never been contained herein.

XX. Section and Other Headings. The article and other headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

XXI. Amendments. This Agreement may be amended only by an instrument in writing signed by the parties hereto.

XXII. Entire Agreement. This Agreement is the entire Agreement between the parties and may be amended or modified only by a written amendment hereto duly executed by both parties.

XXIII. Execution. This Agreement and any amendments thereto shall be executed in duplicate copies on behalf of HOSPITAL and IU Health by an official of each, specifically authorized by its respective Board to perform such executions. Each duplicate copy shall be deemed an original, but both duplicate originals together constitute one and the same instrument.

IN WITNESS WHEREOF, the duly authorized officers and representatives of HOSPITAL and IU Health have executed this Agreement the 1<sup>st</sup> day of August, 2013.

HOSPITAL:

UNION HOSPITAL, INC.

By: [Signature]

Title: President & CEO

AND

IU HEALTH:

INDIANA UNIVERSITY HEALTH, INC.

By: [Signature]

Title: President



## PATIENT TRANSFER AGREEMENT

This Patient Transfer Agreement ("Agreement") is between the Health and Hospital Corporation of Marion County d/b/a Wishard Health Services ("Wishard/Eskenazi"), and Union Hospital Inc. (Union Hospital). Wishard/Eskenazi and Union Hospital are collectively referred to as "Institutions."

Wishard/Eskenazi is a comprehensive public health care system with facilities and services including a hospital, outpatient clinics, inpatient and outpatient mental health services, Level I Trauma Center and the Richard M. Fairbanks Burn Center.

Union Hospital is an acute care hospital.

Wishard/Eskenazi and Union Hospital have determined that it would be in the best interest of patient care and would promote the optimum use of facilities to enter into a transfer agreement for transfer of patients between the respective Institutions.

Wishard/Eskenazi and Union Hospital therefore agree as follows:

1. **Term.** This Agreement shall become effective beginning October 1, 2013 ("Effective Date") and shall remain in effect for a period of one year from the Effective Date, upon which date the Agreement will automatically renew for additional one-year periods.
2. **Purpose of Agreement.** Each Institution agrees to transfer to the other Institution and to receive from the other Institution patients in need of the care provided by their respective Institutions for the purpose of providing improved patient care and continuity of patient care.
3. **Patient Transfer to Wishard/Eskenazi.** The request for transfer of a patient from Union Hospital to Wishard/Eskenazi shall be initiated by the patient's attending physician. Any authorized member of Wishard/Eskenazi's medical staff may authorize a transfer when the patient in question needs Level 1 Trauma Services or the services of the Burn Unit if Wishard/Eskenazi has an appropriate bed available and is not on diversion. All other Union Hospital requests for patient transfers to Wishard/Eskenazi Health shall be referred to the Bed Control Coordinator/House Supervisor. Prior to moving the patient, Union Hospital must receive confirmation from Wishard/Eskenazi that it can accept the patient, and there must be direct communication between the referring and receiving physician. Patients shall be delivered to Wishard/Eskenazi Hospital.
4. **Patient Transfer to Union Hospital.** The request for transfer of a patient from Wishard/Eskenazi to Union Hospital shall be initiated by the patient's attending physician. Any authorized member of Union Hospital's medical staff may authorize a transfer if Union Hospital has an appropriate bed available and is not on diversion. Prior to moving the patient, Wishard/Eskenazi must receive confirmation from Union Hospital

that it can accept the patient, and there must be direct communication between the referring and receiving physician. Patients shall be delivered to Union Hospital's Emergency Department.

5. ***Patient Records and Personal Effects.*** Each of the Institutions agrees to adopt standard forms of medical and administrative information to accompany the patient from one Institution to the other. The information shall include, when appropriate, the following:

- A. Patient's name, address, hospital number, and age; name, address, and telephone number of the patient's legal guardian (if applicable);
- B. Patient's third-party billing data;
- C. History of the injury or illness;
- D. Condition on admission;
- E. Vital signs prehospital, during stay in emergency department, and at time of transfer;
- F. Treatment provided to patient; including medications given and route of administration;
- G. Laboratory and X-ray findings, including films;
- H. Fluids given, by type and volume;
- I. Name, address, and phone number of physician referring patient;
- J. Name of physician in receiving Institution to whom patient is to be transferred; and
- K. Name of physician at receiving Institution who has been contacted about patient.
- L. Specialized needs and dietary restrictions.

Each Institution shall supplement the above information as necessary for the maintenance of the patient during transport and treatment upon arrival at the receiving Institution, and the Institutions shall work together to reduce repetition of diagnostic tests. Transfers of Protected Health Information (PHI) shall comply with the provisions of the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

In addition, each Institution agrees to adopt a standard form to inventory a patient's personal effects and valuables that shall accompany the patient during transfer. The records described above shall be placed in the custody of the person in charge of the transporting medium who shall sign a receipt for the medical records and the patient's valuables and personal effects and in turn shall obtain a receipt from the receiving Institution when it receives the records and the patient's valuables and personal effects. The transferring Institution shall bear responsibility for the loss of the patient's personal effects and valuables unless it can produce an authorized receipt for the personal effects and valuables from the accepting Institution.

6. **EMTALA Compliance and Transfer Consent.** The transferring Institution shall have responsibility for meeting the requirements for an "appropriate transfer" under the Emergency Medical Treatment and Active Labor Act (EMTALA), if applicable. The transferring Institution is responsible for obtaining the patient's consent to the transfer to the other Institution prior to the transfer, if the patient is competent. If the patient is not competent, the transferring Institution shall obtain a family member's consent; if such consent is not possible, the consent of the patient's physician shall be obtained by the transferring Institution.

7. **Payment for Services.** The patient is primarily responsible for payment for care received at either Institution. Each Institution shall be responsible only for collecting its own payment for services rendered to the patient. No clause of this Agreement shall be interpreted to authorize either Institution to look to the other Institution to pay for services rendered to a patient transferred by virtue of this Agreement, except to the extent that such liability would exist separate and apart from this Agreement.

8. **Transportation of Patient.** The transferring Institution shall have responsibility for arranging transportation of the patient to the other Institution, including selection of the mode of transportation and providing appropriate health care practitioner(s) to accompany the patient if necessary. The receiving Institution's responsibility for the patient's care shall begin when the patient is admitted, either as an inpatient or an outpatient, to that Institution.

9. **Advertising and Public Relations.** Neither Institution shall use the name of the other Institution in any promotional or advertising material unless review and approval of the intended advertisement first shall be obtained from the party whose name is to be used. Both Institutions shall deal with each other publicly and privately in an atmosphere of mutual respect and support, and each Institution shall maintain good public and patient relations and efficiently handle complaints and inquires with respect to transferred or transferring patients.

10. **Independent Contractor Status.** Both Institutions are independent contractors. Neither Institution is authorized or permitted to act as an agent or employee of the other. Nothing in this Agreement shall in any way alter the freedom enjoyed by either Institution, nor shall it in any way alter the control of the management, assets, and

affairs of the respective Institutions. Neither party, by virtue of this Agreement, assumes any liability for any debts or obligations of either a financial or a legal nature incurred by the other party to this Agreement.

11. **Liability.** Union Hospital shall save, indemnify, and hold Wishard/Eskenazi harmless of and from any and all liability, loss, costs, and expenses incurred directly or indirectly from any acts, errors, or omissions by Union Hospital, its agents, employees or invitees from any cause arising out of or relating to Union Hospital's performance under this Agreement.

Wishard/Eskenazi shall save, indemnify, and hold Union Hospital harmless of and from any and all liability, loss, costs, and expenses incurred directly or indirectly from any acts, errors, or omissions by Wishard/Eskenazi, its agents, employees or invitees from any cause arising out of or relating to Wishard/Eskenazi Health's performance under this Agreement.

Any obligation of Wishard/Eskenazi Health to save and hold Union Hospital harmless is limited in substance by statutes designed to protect and limit the exposure and liability of Wishard/Eskenazi as an instrumentality of the State of Indiana under the Indiana Tort Claims Act and as a qualified health care provider under the Indiana Medical Malpractice Act.

12. **Exclusion.** Institutions represent and warrant that the Institution, its employees, directors, officers, subcontractors, and agents are not under sanction and/or have not been excluded from participation in any federal or state program, including Medicare or Medicaid.

13. **Insurance.** Each Institution shall maintain at all times throughout the term of this Agreement commercially reasonable insurance, including but not limited to, comprehensive general liability insurance, professional liability insurance, and property damage insurance. Upon request, each Institution shall provide the other with written documentation evidencing such insurance coverage.

14. **Termination.**

A. **Voluntary Termination.** This Agreement shall be terminated by either party for any reason, by giving thirty (30) days' written notice of its intention to withdraw from this Agreement, and by ensuring the continuity of care to patients who already are involved in the transfer process. To this end, the terminating party will be required to meet its commitments under the Agreement to all patients for whom the other party has begun the transfer process in good faith.

B. **Involuntary Termination.** This Agreement shall be terminated immediately upon the occurrence of any of the following:

1. Either Institution is destroyed to such an extent that the patient care provided by such Institution cannot be carried out adequately;
2. Either Institution loses its license or accreditation;
3. Either Institution no longer is able to provide the service for which this Agreement was sought; and
4. ~~Either Institution is in default under any of the terms of this Agreement.~~
5. Either Institution have been debarred, excluded or otherwise determined ineligible from participation in any federal or state program, including Medicare and Medicaid.

14. **Nonwaiver.** No waiver of any term or condition of this Agreement by either party shall be deemed a continuing or further waiver of the same term or condition or a waiver of any other term or condition of this Agreement.

15. **Governing Law.** This Agreement is governed by the laws of the State of Indiana. Any litigation arising out of this Agreement shall be brought in a court located in Marion County, Indiana.

16. **Assignment.** This Agreement shall not be assigned in whole or in part by either party without the express written consent of the other party.

17. **Invalid Provision.** In the event that any portion of this Agreement shall be determined to be invalid or unenforceable, the remainder of this Agreement shall be deemed to continue to be binding upon the parties in the same manner as if the invalid or unenforceable provision were not a part of this Agreement.

18. **Amendment.** This Agreement may be amended at any time by a written agreement signed by the parties.

19. **Notice.** Any notice required or allowed to be given under this Agreement shall be deemed to have been given upon deposit in the United States mail, registered or certified, with return receipt requested. Any and all notices are to be addressed as follows:

WISHARD/ESKENAZI:

Wishard/Eskenazi Health  
Attn: Legal  
1001 W. 10<sup>th</sup> Street  
Indianapolis, IN 46202

UNION HOSPITAL:

Union Hospital Inc.

Attn: President + CEO

1606 N. 7th Street

Terre Haute, IN 47804

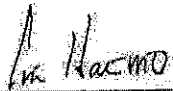
20. **Entire Agreement.** This Agreement constitutes the entire agreement between the parties and contains all of the agreements between them with respect to its subject matter and supersedes any and all other agreements, either oral or in writing, between the parties to the Agreement with respect to the subject matter of this Agreement.

21. **Binding Agreement.** This Agreement shall be binding upon the successors or assigns of the parties.

22. **Authorization for Agreement.** The execution and performance of this Agreement by each Institution has been duly authorized by all necessary laws, resolutions, or corporate actions, and this Agreement constitutes the valid and enforceable obligations of each Institution in accordance with its terms.

Wishard/Eskenazi and Union Hospital are each signing this Agreement on the date stated below that party's signature.


THE HEALTH AND HOSPITAL CORPORATION OF MARION COUNTY  
D/B/A WISHARD HEALTH SERVICES



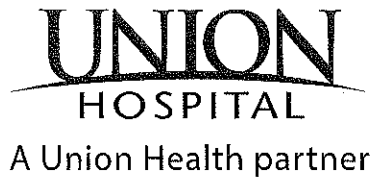
Lisa Harris, CEO and Medical Director

Date: 11/11/13

UNION HOSPITAL INC.

By:  SRVP + COO

Date: 5/1/14



### Operating Room, Staff, & Equipment List

Union Hospital, Inc. Terre Haute is committed to providing care to the injured patient by providing staff available twenty four (24) hours a day. A call team is available within a 30 minute maximum response time. Anesthesiology services are available twenty four hours (24) a day with a 30 minute maximum response time.

- OR is staffed 16 hours a day Monday through Friday in house, on call 8 hours
- Saturdays and Sundays OR is staffed 8 hours, on call 16 hours
- Anesthesia is on call with 1<sup>st</sup> and 2<sup>nd</sup> on call 24 hours a day

The following equipment is available in the OR.

- Hotline Fluid Warmers
- Level 1 Rapid Infusers
- Bair Huggers
- Anesthesia Carts
- Suction system that holds over 20 liters of fluid
- Craniotomy instruments
- Stryker spinal drills
- Mayfield head positioning devices for craniotomy
- Emergency case carts for exploratory laparotomy, AAA/Chest, and a diagnostic laparoscopy.
- Rolling Carts with chest instrumentation, invasive lines, cardiovascular instruments and supplies.
- Capabilities for hemodynamic monitoring through standard and arterial lines.
- Intraoperative radiologic capabilities
- Equipment for fracture fixation
- Bronchoscopy, endoscopy equipment
- Set up for open heart /chest cases

Linda Starkey RN MSN CNOR

System Director Surgical Services

Mark O. Lynch MD FACS

Trauma Medical Director

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A NEW DAWN IN HEALTHCARE

UNION HOSPITAL, INC.  
Terre Haute, Indiana

Nursing Services - Operating Room  
2015

**Plan of Care/Service**  
Department of Surgery

**I SCOPE OF CARE/SERVICE**

Care of the surgical patient is centered within the Surgery Department. The Department Reports through the Organization's structure to the Vice-President of Patient Care Services at Union Hospital Terre Haute. Surgery is located on the first floor in the East building of the hospital and is a twelve suite O.R. Care is provided utilizing a team approach between anesthesia, surgeons, and nursing staff. Surgical care is provided to inpatients and outpatients under the direction of the surgeon and anesthesiologist. Patients' ages range from the neonatal period up and including the geriatric. Surgical intervention is provided to those patients requiring surgery including, but not limited to, cardiovascular, neurosurgery, ENT, orthopedic, urological, dental, obstetrical/GYN, general surgery, organ procurement, and acute trauma. Ongoing assessment and evaluation of patient needs includes patient and significant other education regarding the patient's health care needs.

**A. Key Processes**

1. Accurate scheduling of the patient for surgery.
2. Adherence to the AORN Standards for Perioperative Care.
  - a. Prevention of injury.
  - b. Prevention of infection.
  - c. Evaluation of patient outcome.

**B. Key Customers**

1. Internal:
  - a. Department of Surgery co-workers.
  - b. Members of the Medical, Surgical, and Dental Staff.
  - c. Anesthesia
  - d. X-ray



- e. Pharmacy
  - f. Laboratory
  - g. Respiratory Therapy
  - h. Patient Care Units
2. External:
- a. Patients and families
  - b. Volunteers
3. Key:
- a. Chief of Staff
  - b. Department of Surgery Chair
  - c. Medical Director of Anesthesia

C. Identification of Customer Needs

1. Identification of the patient/customer needs is based on conversation with the patient/customer, ongoing professional assessment and evaluation activities, patient/customer satisfaction surveys, requirements from regulatory agencies, CMS indicators, as well as internal requirements.

## II STAFFING PLAN

- A. All staff (clinical and non-clinical) will complete mandatory education in a 12-month time period and competencies (departmental and organizational) will be completed yearly per job description.
1. Basic requirements for the Perioperative RN include:
- a. See appropriate job description.
  - b. Current CPR certification.
  - c. Completion of monitoring of the local patient competency

program yearly, as well as conscious sedation.

2. The basic requirements for the Surgical Technician include:
  - a. See appropriate job description.
  - b. Associate degree in surgical technology program with completion of Surgical Technologist Certification
  - c. Current CPR certification.
  - d. CST certification
3. The basic requirements for the Nursing Assistant include:
  - a. See appropriate job description.
  - b. Current CPR certification.
4. The basic requirements for the Unit Secretaries/Clerks include:
  - a. See appropriate job description.

B. Staffing Pattern

1. The Surgery Department is staffed 16 hours a day, Monday through Friday with RNs, LPNs or Surgical Technologists, Nursing Assistants, and clerical support. On Saturdays, the department is staffed with 3 RN's and 4 Techs, and 2 NA for 8 hours. On Sundays, the department is staffed by 1 Surgical Team consisting of 1 RN, 1 Tech, and 1 NA for eight (8) hours. All other hours are covered by a call team which consists of an RN, Surgical Technologist and Nursing Assistant
2. Staffing patterns vary with patient acuity and volume. Typical team (RN and Tech) to patient ratio for a routine general anesthesia procedure is 1:1. There will be an RN assigned to circulate all surgical procedures performed in the O.R. Those requiring surgical assistants, it is 1:2 or 2:1 as needed. For the sedation analgesia patient the ratio is 2:1 (with the 2 being 2 RN's or 1 RN and 1 tech) to maintain a safe standard of care. A registered nurse will always be assigned to circulate in any operative procedure in surgery.
3. A team approach is utilized in the Surgery Department. There are five teams: Cardiovascular, Neuro/ENT, Orthopedics, Davinci, and Gen/GYN/GU. Each service has a team leader, who is an RN. Staffing needs are assessed on a continual basis and alterations are based on staff competency, skill mix, physician needs, and patient needs.
4. There is an ongoing cross-training by Surgery employees to ancillary areas, i.e., Cardiac Surgery, Endoscopy, and Union

Hospital Clinton. Variances in staffing are handled by using cross-trained team members from above departments or competent PRN team members.

**C. Assignments**

1. Nursing staff assignments are made by the Control Desk Team Leader with collaboration from the specialty team leaders and input from the OR NCM and the Clinical Educator. Continuity of care is a primary consideration when making assignments.
2. All registered nurses have completed unit-specific skills at the CN2, CN3, or CN4 levels. The LPNs in the department function in the surgical technologist's role.

**D. Plan**

1. The average monthly case load for inpatients is 309 and the average monthly case load for outpatients is 294.
  - a. Monday through Friday: 30-35 or higher
  - b. Saturday: 5-15
  - c. Sundays and Holidays: In patient emergency and urgent cases only

**III PRACTICE GUIDELINES**

- A. Practice guidelines utilized within the Operating Room include the Association of peri-Operative Registered Nurses (AORN) standards and Recommended Practices as well as hospital and departmental policies and procedures.

**IV RELATIONSHIP TO OTHER DEPARTMENTS**

- A. The Operating Room communicates with the patient care areas and other ancillary areas of the hospital. The key ancillary areas are:
1. Radiology
  2. Laboratory
  3. Pharmacy

4. Respiratory Therapy

5. Cath lab

- B. The staff provides intraoperative education for the patients, family, and other staff members in relationship to operative procedures. They serve on various committees within the hospital.

## **V BUDGET SUMMARY**

- A. The unit budget is submitted each June by the Systems Director of Surgical Services, Nursing Care Manager, and Business Manager.
1. Discussions are held with the Systems Director of Surgical Services, OR Nursing Care Manager, OR Business Manager, Peri-Anesthesia NCM, Endoscopy Supervisor, and Team Leaders.
  2. In addition to staff recommendations for capital equipment, replacing aging equipment, and equipment needed for new procedures are also done yearly.
- B. The operating budget includes salaries, med/surg supplies, repair and maintenance, dues and subscriptions, pharmacy, service contracts, education and travel for staff, equipment rental, telephone, employee incidents, and catering costs.
- C. Revenue and expense reports are analyzed monthly by the Nursing Care Managers, Business Manager, and Systems Director to keep abreast of the expense progression for the year.

## **VI GOALS**

- A. Patient Safety: To provide the safest environment possible for our patients by being at or above the 90<sup>th</sup> percentile on all our safety initiatives.
- \*1. Achieve 90<sup>th</sup> percentile in all SCIP measures pertaining to surgery.

- B. Patient Satisfaction: To establish a baseline and improve scoring on a ongoing basis.

1. Increase to 95% of patients who would "definitely recommend" the hospital to friends and family.

C. Employee Satisfaction: 100% of staff provided opportunity of employee survey and have a score above the hospital mean.

1. Attain and maintain at or above the hospital mean in employee satisfaction.
  - Committee opportunities are available to all staff.
  - Continue Thursday quarterly "breakout" sessions.
  - In-services are held monthly on new equipment and review of other equipment that is not used frequently.

2. Reduce OSHA reportable events to 21

D. Physician Satisfaction:

1. Obtain individual physician single room turn over times
  - Union OR  $\leq$  20 min

E. Financial Responsibility: Obtain savings of \$1.2 million through Value Analysis Team (VAT).

\*F. Quality Care: Achieve 90<sup>th</sup> percentile on all SIP/SCIP initiatives.

1. Achieve 90<sup>th</sup> percentile in all SCIP measures pertaining to surgery.

## VII Performance Improvement

1. Achieve 90<sup>th</sup> percentile status on 100% of all SIP/SCIP
2. Continue monitoring of:
  - a. Antibiotic within one hour of surgery start
  - b. Correct antibiotic and discontinuance within 24 hours of surgery end time
  - c. CABG Glucose control
  - d. Maintain Normothermia on all colorectal surgeries
  - e. Labeling of medications on and off the surgery field
  - f. Clipper versus razor shaves
  - g. Final Time Out Verification and Completion of Surgical Safety

Checklist

Approved By:

Rhonda Smith

Rhonda Smith

Vice President Patient Care Services

Linda Starkey

Linda Starkey

Systems Director, Surgical Services

3-6-15

Date

4-23-15

Date

UNION HOSPITAL, INC.  
Terre Haute, Indiana

Department of Anesthesiology  
2015

**Plan of Care/Service**

**I SCOPE OF CARE/SERVICE**

Members of the Department of Anesthesiology provide anesthesia management of the infant, pediatric, adolescent, adult and geriatric patients throughout the Hospital, consistent with the approval of the Department of Anesthesia, appropriate monitoring of the patients, and recognized standards of care. The Department reports through the Organization's structure to the Vice-President of Patient Care Services at Union Hospital Terre Haute.

**A KEY PROCESSES:**

1. Assessment of patients taking into account the social, physiological, economic, cultural and biological dimensions.
2. Care of patients including pre-operative evaluation of patients, the administration of general, regional, and local anesthetics and monitored anesthesia care, with appropriate monitoring during the administration of anesthesia, and post-operative monitoring in the post-anesthesia care unit with therapeutic interventions as necessary, and post-anesthesia visits as appropriate.
3. Communication with patients and/or families and other care givers to facilitate patients' transition along the continuum of care, including consultation on patients requiring ventilatory support, hemodynamic support or on other cardio-respiratory problems for which members of the Medical Staff may request advice.
4. Promotion of patient rights and responsibilities by offering patients and/or families the opportunity to participate in the plan of care.
5. Improving organization performance through ongoing monitoring of anesthesia services and participation with others in performance improvement opportunities.
6. Participation in the management of human resources through evaluation of applications for anesthesia privileges and by providing recommendations to the Executive Committee of the Medical Staff

and to Hospital Administration as to whether such privileges should be granted, curtailed or discontinued.

7. Participation as a part of the leadership of the organization through the selection of a Department Chairman who functions with Department members and other leaders to plan, design, coordinate and integrate anesthesia services and to continuously improve performance.

B The Department's customers include the following:

1. Internal

- A. Allied Health Professionals
- B. Administration
- C. Board of Directors
- D. Nursing staff
- E. Ancillary Departments; e.g., Respiratory, Radiology, Pharmacy, etc.
- F. Quality Review Department

2. External

- A. Patients and families
- B. American Society of Anesthesiologists
- C. Indiana State Medical Association
- D. Indiana Hospital & Health Association
- E. Medical education programs related to anesthesia information/issues

3. Key

- A. Chief of Staff
- B. Chief of the Medical & Dental Staff

C Key Customers

1. Patients and their family units

D Identification of Customer Needs

1. The identification of patients'/customers' needs is based on professional surveys, conversation with customers, ongoing professional assessment and evaluation activities, customer



satisfaction data, requirements from regulatory agencies as well as internal requirements and bench marking information for comparison data.

## II STAFFING PLAN

- A. The Department of anesthesia is responsible for serving defined community needs through the provision of a comprehensive range of quality, cost-effective anesthesia services, in concert with the guiding values of Union Hospital. Members of the Department are anesthesiologists licensed to practice in Indiana who have met the requirements of the Medical and Dental Staff. Physician coverage is on a 24-hour basis.

## III PRACTICE GUIDELINES

- A. Practice guidelines utilized by the Department include standards of the American Society of Anesthesiologists and the American Medical Association's guidelines applicable to the Department of Anesthesia.

## IV RELATIONSHIP TO OTHER DEPARTMENTS

- A. The Department of Anesthesiology communicates with all Medical and Dental Staff Departments and also directly and indirectly communicates with various Hospital departments. Department members serve on numerous committees and teams within the organization.

## V BUDGET SUMMARY

- A. The budget is submitted annually by the Director of Surgical Services and the Chief of Anesthesia for approval by Administration. Discussions are held with the members of the Department to identify items needed to maintain state of the art technology.

## VI GOALS

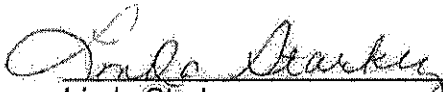
- A. Continue to monitor services provided by anesthesia to maintain state of the art anesthesia practice.
- B. Continue to advance techniques to provide and manage acute and post-op pain management.
- C. Achieve 90<sup>th</sup> percentile on SCIP measures including timing and appropriateness of antibiotics and beta blockers

## VII PERFORMANCE IMPROVEMENT


A. Continuous monitoring of the quality anesthesia perioperative medicine at Union Hospital such that improvements in safety & efficiency are realized.

1. # of intra-op and PACU deaths
2. # of cases requiring CPR intra-op
3. % of patients where death occurred within 48 hours following anesthesia
4. Cerebrovascular Accident/Myocardial Infarct within 48 hours
5. # of reintubations in PACU

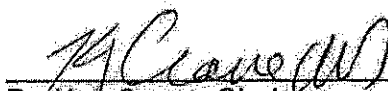
Approved by:

  
Linda Starkey  
Director of Surgical Services

4/23/15  
Date

  
Rhonda Smith  
Vice President Patient Care Services

3-6-15  
Date

  
Dr. Ken Crane, Chairman  
Department of Anesthesia

4-24-15  
Date

**UHTH DEPARTMENT POLICY**  
**SUBJECT: Emergency Anesthesia Coverage**

**DEPARTMENT:** UHHG SURGICAL SERVICES, UHTH ANESTHESIA  
**POLICY #:** 2278

**REVIEWED:** 9/14; 9/15

**REVISED:**

**ORIGINAL DATE:**

**CURRENT EFFECTIVE  
DATE:** 5/13

**AUTHORIZED BY:** Dept. of  
Anesthesia

(Printed copies are for reference only. Please refer to the electronic copy for the latest version.)

**POLICY:** To provide adequate anesthesia services for unexpected emergency cases

- PROCEDURE:**
1. Anesthesia will be available seven days a week 24 hours a day to cover emergency surgeries.
    - a. Anesthesia is covered with a minimum of 7 anesthesia available Monday thru Friday from 0700 to 1530, 3-4 anesthesia from 1530-1930, 2 anesthesia from 1930-2300, and 2 anesthesia from 2300-0700. There are a minimum of 2 anesthesia available on all weekends and holidays.
  2. Emergency cases after hours are scheduled with the Operating Room PM Charge nurse until 2300, then the house supervisor. They will notify the Anesthesia on call. If the first call anesthesia is doing a case and an emergency presents then the second call anesthesia will be called in to provide anesthesia services.
  3. Emergency cases (those declared emergency by surgeon) shall have priority and be done ahead of elective surgery. It's the surgeon's responsibility to notify his/her colleague when bumping is necessary.
  4. Patient's requiring emergency surgery which involves an on-call team and anesthesiologists must be seen and evaluated by the surgeon before anesthesia or surgery team is called. EXCEPTION: Diagnosis by Emergency Room physician of a condition threatening to life or limb.
  5. An emergency is that surgical procedure which the physician deems necessary to be done within a specific time frame. The surgeon must document on the patient's chart, "This is a class (type) emergency". Only extreme emergency and class I emergency cases as defined in the rules and regulations would necessitate calling in the second anesthesia provider on call.

**REFERENCES:** "Medical Staff Rules and Regulations 2015"

UH and UHC DEPARTMENT POLICIES  
Subject: Emergency Anesthesia Coverage  
Date Approved: 09/18/2015

# **CURRICULUM VITAE**

**James Harry Griggs**

## **Employment History**

**Union Hospital – Terre Haute, IN**

**August 2009 – present**

**Medical Director of Anesthesiology July 2015 – present**

- Adjunct Professor, Indiana University School of Medicine, Department of Anesthesiology – responsible for clinical rotations with medical students
- Created and led current anesthesia and in-service lectures for surgical nursing staff
- Member of: Trauma Committee, OR Committee, OR Governance Committee

**Griggs & Acker, Inc. (operating as Floor Coverings International)**

**President 1995-2000**

**Buonomo & Griggs Carpet Technicians Inc.**

**President 1985-2000**

## **Medical Education**

- Indiana University School of Medicine – M.D. (August 2001 – May 2005)
- Intern, Ball Memorial Hospital, Muncie, Indiana (June 2005 – June 2006)
- Resident, Indiana University School of Medicine, Anesthesia Department, Indianapolis, IN (July 2006 – June 2009)
- Indiana University / Purdue University, Fort Wayne, IN - Pre-requisites for Medical School – (January 1999 – May 2001)

## **Undergraduate Education**

- Indiana University – Bloomington, IN (August 1982 - May 1986)
- Major: B.S in Business – Quantitative Business Analysis
- Major: (second major) Business – Operations Management
- Executive officer – Lambda Chi Alpha Social Fraternity

## **Licensure and Certification**

- Permanent physician license obtained April 2007
- DEA and CSR obtained February 2008

- NPI obtained April 2008
- ABA Written Board Exam taken August 2009 (passed)
- ABA Oral Exam taken April 2010 (passed)

### **Professional Societies**

- American Society of Anesthesiologists (ASA)
- Indiana Society of Anesthesiologists (ISA)
- ASA Political Action Committee

### **Skills**

- All types of general anesthesia, excluding hearts secondary to TEE/fellowship requirement at current hospital
- Very proficient in regional anesthesia, ultra sound guided pain blocks and nerve catheters

### **References**

Available upon request

**ABMS® Board Certification Credentials Profile***A service provided by the American Board of Medical Specialties***New Search | Search Results | Feedback | Save Physician | Print**

To become Board Certified, a physician must achieve expertise in a medical specialty or subspecialty that meets the profession-driven standards and requirements of one (or more) of the 24 ABMS certifying boards. To maintain Board Certification, the certifying boards may require physicians, depending on their date of initial certification, to participate in on-going programs of continuing learning and assessment (Maintenance of Certification) designed to help them remain current in an increasingly complex practice environment.

**James H. Griggs ( ABMSUID - 939945 )**

Viewed:12/15/2015 11:27:29 AM CST

**DOB:** Private**Education:** 2005 MD (Doctor of Medicine)**Address:****Certification:****American Board of Anesthesiology****Anesthesiology - General****Status: Certified**

Status	Duration	Occurrence	Start Date - End Date	✱ Participating in MOC
Active	Time-Limited	Initial Certification	04/23/2010 - 12/31/2020	Yes

**Learn more about Anesthesiology MOC program**

ETHICS • HONOR • SKILL

**Notice:** It is up to the user to determine if the physician record obtained from this service is that of the physician being sought.

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**Dultz**  
**December 2015**

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[Print Calendar](#)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
29 A. Deshpande 7:00 AM-7:00 AM	30 L. Dultz 7:00 AM-7:00 PM R. Gowda (Shashikumar) 7:00 PM-7:00 AM	1 L. Dultz 7:00 AM-7:00 PM L. Dultz 7:00 PM-7:00 AM	2 L. Dultz 7:00 AM-7:00 PM A. Bhuptani 7:00 PM-7:00 AM	3 L. Dultz 7:00 AM-7:00 PM A. Deshpande 7:00 PM-7:00 AM	4 L. Dultz 7:00 AM-5:00 PM R. Gowda (Shashikumar) 5:00 PM-7:00 AM	5 R. Gowda (Shashikumar) 7:00 AM-7:00 AM
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Go Back << >> Print Calendar						
Dultz November 2015						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 A. Bhuptani 7:00 AM-7:00 AM	2 L. Dultz 7:00 AM-7:00 PM A. Deshpande 7:00 PM-7:00 AM	3 L. Dultz 7:00 AM-7:00 PM A. Bhuptani 7:00 PM-11:20 PM L. Dultz 11:15 PM-8:00 AM	4 L. Dultz 7:00 AM-7:00 PM A. Bhuptani 7:00 PM-7:00 AM	5 L. Dultz 7:00 AM-7:00 PM R. Gowda (Shashikumar) 7:00 PM-7:00 AM	6 L. Dultz 7:00 AM-5:00 PM L. Dultz 5:00 PM-7:00 AM	7 L. Dultz 7:00 AM-7:00 AM
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**Dultz**  
October 2015

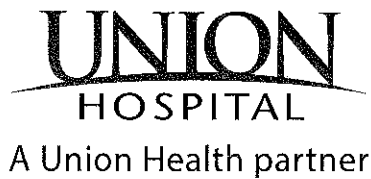
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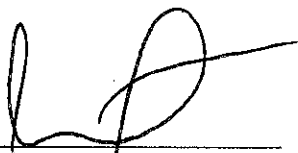
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Dultz September 2015						
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30 L. Dultz 7:00 AM-7:00 AM	31 L. Dultz 7:00 AM-7:00 PM	1 L. Dultz 7:00 AM-7:00 PM L. Dultz 7:00 PM-7:00 AM	2 L. Dultz 7:00 AM-7:00 PM A. Bhuptani 7:00 PM-7:00 AM	3 L. Dultz 7:00 AM-7:00 PM A. Deshpande 7:00 PM-7:00 AM	4 L. Dultz 7:00 AM-5:00 PM A. Bhuptani 5:00 PM-7:00 AM	5 A. Bhuptani 7:00 AM-7:00 AM
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## Critical Care Physician Coverage

Our critical care physicians are committed to providing quality care to the injured patient and are promptly available twenty four hours a day.



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Lawrence R. Dultz MD  
Pulmonology, Critical Care Medicine



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Mark O. Lynch MD FACS  
Trauma Medical Director

**UHTH DEPARTMENT POLICY**  
**SUBJECT: Emergency Anesthesia Coverage**

<b>DEPARTMENT:</b> UHHG SURGICAL SERVICES, UHTH ANESTHESIA	
<b>POLICY #:</b> 2278	
<b>REVIEWED:</b> 9/14; 9/15	<b>ORIGINAL DATE:</b>
<b>REVISED:</b>	<b>CURRENT EFFECTIVE DATE:</b> 5/13
	<b>AUTHORIZED BY:</b> Dept. of Anesthesia

(Printed copies are for reference only. Please refer to the electronic copy for the latest version.)

**POLICY:** To provide adequate anesthesia services for unexpected emergency cases

- PROCEDURE:**
1. Anesthesia will be available seven days a week 24 hours a day to cover emergency surgeries.
    - a. Anesthesia is covered with a minimum of 7 anesthesia available Monday thru Friday from 0700 to 1530, 3-4 anesthesia from 1530-1930, 2 anesthesia from 1930-2300, and 2 anesthesia from 2300-0700. There are a minimum of 2 anesthesia available on all weekends and holidays.
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**REFERENCES:** "Medical Staff Rules and Regulations 2015"

UH and UHC DEPARTMENT POLICIES  
Subject: Emergency Anesthesia Coverage  
Date Approved: 09/18/2015

**Functional Area:** Care of the Patient

**Subject:** INTUBATION GUIDELINES FOR RESPIRATORY CARE

---

**Policy:** Respiratory Therapy will intubate patients that are ordered to be intubated, unless physician specifically requests anesthesia. Airway emergencies in house will be managed by Respiratory Therapy and/or the physician present.

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**Purpose:** To maintain quality and consistent care when intubating patients.

**Equipment:**

- A. Resuscitation bag and mask.
- B. Proper size blades and handle.
- C. 5cc syringe
- D. Proper size ET tube, one extra of size above and below desired size
- E. Stylette
- F. Tape
- G. Tonsil tip suction catheter
- H. CO2 detector
- I. Personal protective equipment
- J. Glidescope

**Procedure:**

1. Obtain order, check and verify order with nursing. During a cardiopulmonary arrest, physician will be present to give verbal order.
2. Assure proper function of blade and handle.
3. Obtain proper size ET tube and check cuff to assure no leaks.
4. Assure suction available and functioning.
5. Do not attempt more than 30 seconds each attempt. Ambu patient (following ACLS guidelines) between each attempt to maintain acceptable saturation and use oral airway if patient is unresponsive.
6. Gently place blade in the patient's mouth, do not pry back on teeth, view vocal cords and place ET tube gently through the vocal cords.

7. Auscultate lungs after successful intubation to assure equal breath sounds bilaterally, using the 5 point auscultation method. Use CO2 detector that is in the resuscitation bag and observe for color change, also utilize the EtCO2 device when able looking for waveform, as the most important consideration is detection of esophageal intubation. Nurse will order stat chest x-ray.
8. Secure ET tube with tape; note the cm mark at the lip.
9. Attach patient to ventilator after receiving initial settings from the physician.
10. Chart the intubation in the Intubation section of Soarian and chart the following: size of ET tube used, cm mark at the lip, initial settings, reason patient was intubated, any adverse reactions, any problems during intubation and any trauma cause to the patient.
11. Failure to use PPE, such as goggles, mask or gloves, could result in disciplinary action.
12. Therapists are checked off per physician and/or RT manager/ ACM initially after hire. Annually chart audits are conducted to determine number of intubations per therapist and any adverse outcomes.

#### Outside intubations

1. When a patient is brought into the facility already intubated the Respiratory Therapist will follow the guidelines listed below:
  - a. Listen to breath sounds using the 5 point auscultation, anterior, lateral and stomach.
  - b. Change to our resuscitation bag and utilize the CO2 detector to confirm tube placement.
  - c. Note the cm mark and secure if necessary.

#### References

1. ACLS guidelines
2. AARC guidelines: Management of Airway Emergencies





## Commitment of Radiology

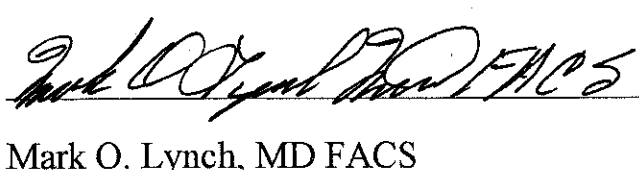
Our radiology department at Union Hospital, Inc. is committed to providing care to the injured patient by providing CT scan and conventional radiology services twenty four (24) hours a day.



Dr. James Backstrom

Medical Director of Radiology

Date: 10/1/2015



Mark O. Lynch, MD FACS

Trauma Medical Director

Date: 10/1/2015

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A NEW DAWN IN HEALTHCARE

## **UNION HOSPITAL, INC.**

### **Union Hospital**

### **Plan of Service**

**2014 - 2015**

#### **Imaging Services**

#### **SCOPE OF SERVICE**

Imaging Services is a service department consisting of general diagnostic, ultrasound, computed tomography, MRI, and diagnostic procedures. We offer diagnostic and therapeutic services 24 hours a day either through staffing or on-call basis. The department is located in the northwest section of the ground floor of the East building. General radiology services are also offered at Cork Medical Center, 408 North Second St., Marshall, IL, Monday-Friday, 9 a.m. - 5:30 p.m. central time. Thomas Plaza Imaging, U.S. Hwy 41 South, Suite 5500, Terre Haute, IN, Monday - Friday, 8:00 a.m. - 4:30 p.m. eastern time offers general radiology, CT, MRI, ultrasound, and screening mammography. Professional interpretive services are also provided for the Center for Occupational Health, 4001 Wabash Ave, Terre Haute, IN. The department reports through the organization's structure to the Vice President/COO. The radiologists report to the President/CEO and their designees (System Directors of Imaging Services and Physician Services) in consultation with the Medical Director of Radiology. The department's area of services consist of providing diagnostic information and education to the attending physicians and patients via a report to aid in the care of the patient through different types of examinations for all ages.

Imaging Services key processes include:

1. Assessment of patients and their families taking into account the social, physiological, economic, cultural and biological dimensions.
2. Care of patients, including the provision of essential diagnostic information to assist physicians in establishing diagnoses and monitoring the management of patients, as well as the provision of interventional procedures.
3. Communication with patients and/or families and other caregivers to facilitate patients' transition along the continuum of care.
4. Promotion of patient rights and responsibilities by offering patients and/or families the opportunity to participate in the plan of care.
5. Provision of education about radiology and radiation oncology services to department members, hospital staff, and other members of the Medical Staff as well as to the community.
6. Participation in the management of the environment to secure a safe, clean, effective and harmonious environment for patients, visitors and staff members.

7. Improving organization performance through ongoing monitoring of imaging services and participation with others in performance improvement opportunities.
8. Participation in the management of information relative to these services by giving input to the form and format of the medical record, by maintaining documentation specific to radiology and by using aggregate data, knowledge based information, and comparative data and information in performance improvement.
9. Participation in the management of human resources through evaluation of applications for radiology privileges and by providing recommendations to the Executive Committee of the Medical Staff and to Hospital Administration as to whether such privileges should be granted, curtailed or discontinued. Also, providing information and support to physicians seeking to regain modified or discontinued privileges in the Department of Imaging Services.
10. Participation as a part of the leadership of the organization through the selection of an effective Department Chairman who functions with department members and other leaders to plan, design, coordinate and integrate imaging services and to continuously improve performance.

The department works through a referral from the attending physician in conjunction with a recommendation from the radiologist to meet our customers' needs.

#### Internal Customers

Department Co-workers  
Medical and Dental Staff  
Nursing Staff  
System Directors, Directors  
Administration  
Ancillary Staff  
Financial Services Department

#### External Customers

Medical and Dental Staff Offices  
Physician, other than Medical and Dental Staff  
Hospitals and Clinics  
ACRVHA Tri-State  
Professional Colleagues

#### Key Customers

In and Outpatients and their Family Unit  
Medical and Dental Staff

### **STAFFING PLAN**

The System Director reports to the Vice President/COO and is responsible for coordination of all departmental activities and for the assignment of those activities. The radiologists report to the President & CEO and their designee, in consultation with the Medical Director of Radiology. Staffing of the department depends on patient volumes and the starting needs in providing new services.

The present Imaging Services staffing includes the following:

- Radiologist Medical Director - 1
- Staff Radiologists - 8 FTE Radiologists & 3 Part-Time Radiologists
- System Director - 1
- Imaging Supervisor – 2
- Imaging Analyst – 1
- Registered Nurse – 2
- PRN Registered Nurse - 1
- Registered CT Technologists – 10
- PRN Registered CT Technologists - 1
- Non-Registered CT Technologists – 2
- Registered MRI Technologists – 5
- Non-Registered MRI Technologists – 1
- Registered Ultrasound Technologists – 2
- Non-Registered Ultrasound Technologists – 3
- PRN Registered Ultrasound Technologist – 1
- Radiologic Technologists - 16
- Radiologic Technologists PRN – 7
- Radiologic Technologists Diagnostic Procedures – 3
- Licensed Practical Nurses - 2
- Orderlies – 19
- PRN Orderlies - 3
- Imaging Assistant- 2
- PRN Imaging Assistant - 1
- Radiology Clerks – 6
- Teleradiology Services – see appendix A

#### Basic Requirements for System Director:

- Three years of management experience required.
- Work in various settings and situations helpful.
- Experience in the clinical setting required, preferably in Radiology or a similar area.
- Experience dealing with several projects in addition to overall management necessary.
- Experience in long-range planning.

Experience in dealing with various groups of people (medical staff, administration, patients, and staff) as necessary.

Must be accomplished in written and verbal business communication.

Maintains strict confidentiality regarding patient and strategic Hospital information.

Basic Requirements for Supervisor:

Completion of a formal radiology technology training program approved by the AMA.

Registration of the American Registry of Radiological Technologist (AART) required.

Three years as a staff technologist with additional supervisory experience preferred.

Must deal successfully with a wide variety of people.

Must be accomplished in written and verbal business communications.

Maintains strict confidentiality regarding patient and strategic Hospital information.

Basic Requirements for Registered Nurse:

Licensed by the Indiana State Board of Nursing Education

Experience in Critical Care

Completion of ACLS

Basic Requirements for Radiologic Technologist, CT Technologist, MRI Technologist:

Graduation from an accredited radiology technology program

Registered by American Registry of Radiologic Technologist

Certified by the Indiana State Department of Health

Basic Requirements for Ultrasound Technologist:

Graduation from an accredited radiology technology program

Registered by American Registry of Radiologic Technologist

Certified by the Indiana State Department of Health

Basic Requirements for Licensed Practical Nurse:

Graduation from an accredited school of Licensed Practical Nursing

Licensed by the Indiana State Board of Nurses

One year experience in Licensed Practical Nursing

Basic Requirements for Orderly, Imaging Assistant, Radiology Clerk:

High school diploma

Completion of on-the-job training

Medical office background and/or CNA or EMT

**RELATIONSHIP TO OTHER DEPARTMENTS**

The Imaging Services Department communicates with all Hospital departments, all Medical and Dental Staff at various levels. The department employees provide diagnostic imaging and education to all medical areas and all Medical and Dental Staff.

### **BUDGET SUMMARY**

The department's budget is submitted each April for operating and capital expenditures through a process of a three year plan with input from departmental staff, radiologists, other Medical Staff, and needs of the customers. Capital equipment needs are based also on advancements in new technology, new procedures, increases in procedures and upgrades of present systems. At the time of purchase the department will set up a team of all parties involved to evaluate the expenditures and prepare a recommendation to the Administrative Staff. The operating budget includes salaries for department staff and locum tenens, education and travel, supplies, medical and surgical supplies, phone expenses, dues and subscriptions, repair and maintenance, film expenses, computer software/leases, contrast media and lease expenses. Reports are reviewed monthly by Administration and the System Director to keep abreast of the expenses for the year.

### **GOALS**

1. Achieve 100% Turn Around Time Performance for Emergency Department CT Heads for possible stroke. (PI Goal)
2. Attain 90<sup>th</sup> percentile ranking for employee satisfaction by focusing on educational needs and increased structure and consistency of educational training.
3. Improve community awareness of services offered and screenings available by offering community open house tours 2-4 times per year.
4. Ensure that man-hours and controllable items of operating budget are within or below budget.

### **PERFORMANCE IMPROVEMENT ACTIVITY**

Achieve 100% (CMS) TAT for Emergency Department CT Heads for Stroke - door to results within 45 minutes.

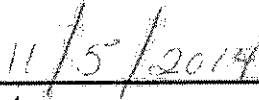
- ~ Monitor and evaluate communication and hand off between ED and CT departments
- ~ Timely Radiologist notification
- ~ Stroke Steering Committee participation
- ~ Develop specific education regarding stroke policies and processes for HealthStream implementation

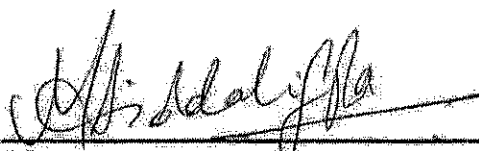
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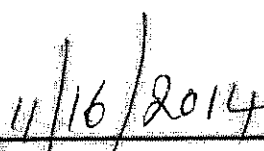
Target = 100%

Threshold = 85%

  
Director's Signature

  
Date

  
Medical Director's Signature

  
Date

  
Senior Leader's Signature

11/13/14  
Date

### Appendix A

#### Scope of Teleradiology Service

Union Hospital contracts Imaging On call, 695 Dutchess Turnpike, Suite 105, Poughkeepsie, New York, 12603 to perform radiology interpretation services 24 hours, 7 days per week, throughout the calendar year; allowing Union Hospital to meet its radiology coverage needs and responsibilities. Imaging On Call provides Board Certified Radiologists to provide professional radiology interpretation services; utilizing secured broadband communications to send, receive and analyze radiology images. Imaging On Call is responsible for obtaining and maintaining proper medical staff privileges and state Medical Board Licensing in Illinois and Indiana, for radiologists providing teleradiology services.

Monthly physician coverage schedules are provided to Union Hospital by Imaging On Call. These schedules are reviewed and used to ensure that all physician names listed on Union's coverage schedule are only of those physicians currently credentialed to provide services for Union. Random spot checks of dictated final reports are also done via the Imaging Room staff. In addition, only credentialed radiologists are entered into the Radiology Information System (RIS). Reports dictated by physicians not in RIS will not flow through Union's RIS.

#### Workflow process

Union Hospital Imaging Assistant - will forward images and pertinent patient history to Imaging On call. The exam will be routed to the interpreting radiologist, who will dictate a final report and electronically sign. The report will then be transmitted via HL7 interface back to UNION Hospitals Information system and be distributed to the ordering physician.

#### Billing of Professional Fees

Imaging On Call has established an HL7 billing interface with Union Hospital's information system to capture all professional charges for exams interpreted by Imaging On Call. All charges are billed under the PRONET TIN (Tax Identification Number) to the payers and collected by the RadNet billing team.



## **Critical Care Unit**

### **Plan of Care/Nursing Staff Guideline**

#### **For Trauma Patients**

#### **I. Scope of Care**

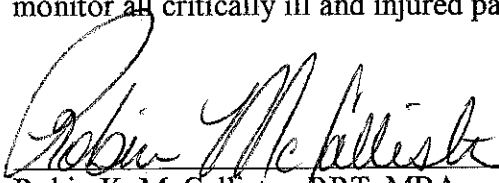
Care of the Critical Care Unit patient is centered within the Critical Care Unit of the hospital. The practice of nursing at Union Hospital is guided by national nursing standards, the Indiana Nurse Practice Act, and internally approved standards of care. All nursing care is provided utilizing a total patient care approach that is provided by Registered Nurses.

#### **II. Staffing**

The Critical Care Unit is staffed 24 hours a day with two 12 hour shifts. Staffing consists of Registered Nurses. Trauma patient to nurse ratio is 2:1 to 1:1 as acuity levels require.

#### **III. Resources**

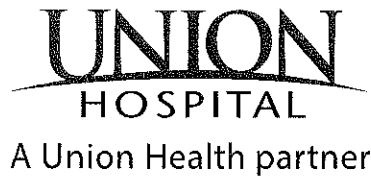
The Critical Care Unit at Union Hospital has the resources to care for, resuscitate, and monitor all critically ill and injured patients.

  
Robin K. McCallister, RRT, MBA  
Director of Critical Care, Respiratory Therapy,  
Cardiovascular Nursing, Resource Center

Date

10/1/15






## **Intensive Care Unit Equipment**

- Adult (5) and Pediatric (1) code carts
- Cooling blanket machine
- Blood warmer
- Rapid Infuser
- Intra-aortic balloon pump
- Temporary pacemaker
- Sternotomy tray with internal defibrillator
- Pericardiocentesis tray
- Swan tray
- Chest tube insertion tray
- Central line tray
- Ventriculostomy/ICP monitor/Drain
- Portable bedside ultrasound
- Chilled fluids
- BIS monitor
- Peripheral nerve stimulator
- Intubation supplies and video laryngoscope
- SvO2 monitors for continuous cardiac output and cardiac index
- Hardwired Phillips monitors in all rooms (HR, BP, RR, SpO2, ART, CVP, ICP, PAP, hemodynamics, ventilator, and charting integration)

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A NEW DAWN IN HEALTHCARE



 <b>LabCorp</b> Laboratory Corporation of America	LC-Haute-QA-POL-026	
	Title: Scope of Service	Revision 1

## SCOPE OF SERVICE

### MOST RECENT DOCUMENT REVISION

1	NA	New Policy

### SCOPE

#### SCOPE OF SERVICE

The laboratory's goal is to provide the Wabash Valley with the best possible laboratory services. Our mission is to produce meaningful clinical information from laboratory testing to help our customers practice cost effective medicine, and to assist them in identifying the appropriate clinical pathway to treat their patients.


### POLICY

#### NATURE OF SERVICE

\* Labcorp's main laboratory facility in the Wabash Valley, is located on the lower level of Union Hospital (UH) -Terre Haute. LabCorp also operates the laboratory at Union Hospital-Clinton (UHC). Both locations are open 24 hours per day, seven days a week.

Centers for Medicare and Medicaid Services (CMS) and the Healthcare Facilities Accreditation Program (HFAP) accredit the UH & UHC laboratory via deemed status through the inspection and accreditation program of the College of American Pathologists.

Pathologists, along with all of the technical staff, are involved in the practice of clinical pathology, including analysis of blood, fluid, tissue, and cytologic materials obtained from the patients. The clinical laboratory members play an important part in the hospital quality assurance program, participating on many committees including Infection Control, Lab Stewardship, Stroke, AMI/Chest Pain, Safety, Exposure Reduction, and Patient Safety Committee. Laboratory quality reports are shared with the hospital through the Lab Stewardship committees. The Clinical laboratory department is actively involved in the medical education of medical technologists, medical technicians, nurses, hospital staff, medical students, and the public at large. The laboratory director, along with LabCorp management team, ensures the laboratory has current equipment and training by appropriate strategic planning and annual budgeting for educational programs as well as research and development. The laboratory budget includes funds for laboratory staff to fulfill the required continuing education programs through a subscription to an online Continuing Education program for clinical laboratories. Pathologists participate in CME (Continuing Medical Education) each year. Whenever possible, the LabCorp contracts with manufacturers for new instrumentation training.

	LC-Haute-QA-POL-026	
	Title: Scope of Service	Revision 1

LabCorp Union Hospital facility includes the following departments:

Blood Bank	Serology	Histology	Sendouts
Chemistry/Toxicology	Urinalysis	Lab Support/Call Center	Quality Assurance
Hematology/Coag	Microbiology	Phlebotomy	Safety

The laboratory furnishes services that permit the hospital to comply with all applicable conditions of participation and standards of contracted services. The identification of the customers' needs is based on conversation with the customer, ongoing professional assessment and evaluation activities, customer satisfaction data, and requirements from regulatory agencies as well as internal requirements.

#### STAFFING PLAN

The department Director, Technical Consultants, Technical Supervisors, General Supervisors, Clinical Consultants, and all Testing personnel meet or exceed the personnel requirements of CLIA 88. Job responsibility statements that have been approved and signed by the Director and each staff member are maintained in each employee's file.

#### PRACTICE GUIDELINES

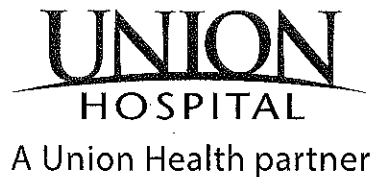
The laboratory utilizes the most stringent guidelines of CLIA 88, CAP, HFAP, NRC, & IOSHA as practice guidelines. The laboratory also ensures compliance with applicable state and local laws and regulations by obtaining information from multiple sources including hospital management, state medical societies, Indiana and Illinois state departments of health, and participation in professional clinical organizations

#### DOCUMENT APPROVAL

Documentation of approval of new and revised documents is maintained in master binders, annual review by staff maintained by departments with the control copies.

#### DOCUMENT REVISION HISTORY

Revision number	Section & Paragraph Affected	Summary of Changes as Compared to the Previous Version of the Document
		NA-New



## **Blood Bank and Laboratory Services**

Union Hospital's laboratory and blood bank services are provided by LabCorp and are in house with availability twenty four (24) hours a day with the ability to type and crossmatch blood products to meet the needs of the injured patient.

The following is a list of the blood supply inventory.

### **LPRBC:**

O Pos 50	O Neg 12
A Pos 50	A Neg 12
B Pos 8	B Neg 5
AB Pos 2	AB Neg 2

### **FFP:**

O 25  
A 25  
B 10  
AB 25

### **Cryo:**

AHF Single 10  
AHF Pooled 20



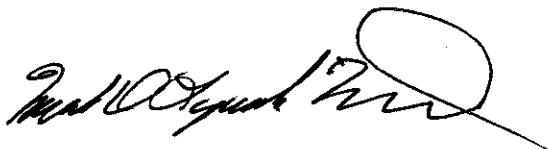
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Jim Clark  
Director of Laboratory Services  
LabCorp, Terre Haute  
Union Hospital

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A NEW DAWN IN HEALTHCARE

**ADMINISTRATIVE MANUAL**  
**SUBJECT: MASSIVE BLOOD TRANSFUSION PROTOCOL (MTP)**

<p><b>REVIEWED:</b> </p> <p><b>REVISED:</b></p>	<p><b>POLICY #:</b> 2799</p> <p><b>ORIGINAL DATE:</b> 10/05/2015</p> <p><b>CURRENT EFFECTIVE DATE:</b> 10/5/2015</p> <p><b>AUTHORIZED BY:</b> Trauma Peer Review Committee &amp; MEC</p>
--	--

(Printed copies are for reference only. Please refer to the electronic copy for the latest version.)

**POLICY:**

To provide procedures for activation and management of the Massive Blood Transfusion Protocol (MTP). The MTP is a protocol designed to provide significant volumes of uncrossmatched red cells, platelets, and plasma in an efficient, effective, and expedited manner in the treatment of hemorrhaging patients.

**PURPOSE:**

To provide procedures for activation and management of the Massive Blood Transfusion Protocol (MTP). The MTP is a protocol designed to provide significant volumes of uncrossmatched red cells, platelets, and plasma in an efficient, effective, and expedited manner in the treatment of hemorrhaging patients.

This document addresses:

- The process for activating and deactivating the MTP
- Specific steps to insure rapid availability and delivery of blood components
- Key issues to insure availability of blood components
- Steps to be followed to limit wastage

**SCOPE:** This protocol is primarily for use by the Blood Bank, Emergency Department, Surgery, Labor and Delivery and Intensive Care Unit at Union Hospital.

**DEFINITIONS:**

- **Apheresis Platelet:** Also known as a single donor platelet that is equivalent to 6-8 pooled random donor platelets.
- 
- **Cryoprecipitate:** The precipitate that forms when blood plasma is cooled that is rich in coagulation factor VIII.
- 
- **Leukopoor Reduced Packed Red Blood Cells : (LPC)**
- 
- **Massive Blood Transfusion:** Transfusion of 10 or more Red Blood Cell (RBC) components within 24 hours.
- 
- **Mismatched Blood:** Donor blood that is a major mismatch with the patient's blood type: (for example: Group A Rh positive donor RBCs transfused to Group O Rh positive patient)
- 
- **Type-compatible ABO Blood:** Donor blood that is not identical to the patient's blood type, but is compatible for transfusion (for example: Group O Rh positive donor RBCs transfused to Group A Rh positive patient).
- 
- **Type-specific Blood:** Donor blood that is the identical blood type of the recipient.
- 
- **Uncrossmatched Blood:** Donor blood that has not been crossmatched either serologically or electronically with the patient's sample.

#### PROCEDURE/PROTOCOL:

##### PROTOCOL STATEMENTS

- A. The MTP may be activated by the treating physician or their designee when it is anticipated that the patient will require the **rapid transfusion** of massive volumes (usually greater than 10 units) of blood and blood components.
- B. The MTP must be deactivated by the treating physician or their designee once it has been determined that the urgent need for blood has been managed.
- C. The treating physician or their designee shall contact the Labcorp Blood Bank to activate the MTP at 7541.
- D. The blood bank shall maintain adequate inventory in house to insure that type-specific and/or type-compatible blood components are made available in a timely manner.

- E. The blood bank shall coordinate with blood suppliers to maintain inventory of blood components.
- F. Group O Rh Negative Packed Red Cells (LPC) will be issued for the first dose (4 units LPC). Subsequent doses may be Group O Rh Negative Packed Red Cells, unless blood inventory restraints require the release of Group O Rh Positive Packed Red Cells.
- G. It is an expectation that a blood sample for type and screen will be sent to the Blood Bank at the earliest possible time (usually within 15 minutes) in order to provide type specific rather than universal donor type compatible components. This sample should be drawn BEFORE transfusing any blood.
- H. Group AB Plasma will be issued for the first two doses of the MTP if the patient's blood type is unknown. In order to protect the AB plasma supply, the type and screen blood sample must be received and resulted by the blood bank before the third and subsequent doses of plasma are prepared for the patient.
- I. **Uncrossmatched**, type-specific or type-compatible LPCs will be issued to expedite the provision of LPCs.
  - 1. Serologic or electronic crossmatches will be performed retrospectively. The treating physician or their designee will be notified immediately if incompatible or mismatched units were issued by the Blood Bank.
- J. The Blood Bank Technician will consult with the treating physician or their designee, when the inventory of compatible (type-specific or type-compatible) blood is in danger of being depleted for use in the system.
- K. To expedite the provision of blood components, special component processing such as CMV negative, Fresh, Washed, HLA matched, Antigen matched and/or Irradiated blood will not be provided.
- L. Blood Pick up/distribution

Unit assigned Runner will respond to blood bank upon activation of MTP in order to distribute the blood products to the area requesting in a timely manner.



M. Leukoreduced Apheresis Platelets (LAPL) and Cryoprecipitate (CRYO) shall be maintained at ambient room temperature. DO NOT refrigerate or place these components in transport coolers.

N. A dose of CRYO will be thawed only when ordered.

**PROCEDURE:**

- A. The treating physician or their designee identifies the need for Massive Transfusion. The following physicians are responsible for maintaining a Massive Transfusion: ED physician, General/Vascular Surgeon, Anesthesiologist, Intensivist, Gastrointestinal physician, or Obstetrician/Gynecologist.
- B. An order for Massive Blood Transfusion Protocol is received.
- C. The nurse or designee will call the Blood bank directly at 7541 and notify the blood bank of the following information: Patient name, location, medical record number, Typenex number, if available, sex, age, and situation.
- D. Send Type and Screen sample to the Blood Bank as soon as possible (BEFORE any transfusions have taken place.)
- E. Blood Bank will immediately begin preparing the first set of blood components.
- F. The Blood Bank Technologist (BBT) prepares each dose at a 1:1 red cell to plasma ration. Each dose shall contain 4 LPCs, 4 Plasmas, and every other dose shall also include 1 LAPL.

	PRBC	Plasma	PLTS	LABS
Set 1	1 2 3 4	1 2 3 4	*1	
Set 2	5 6 7 8	5 6 7 8	0	**
Set 3	9 10 11 12	9 10 11 12	*2	
Set 4	13 14 15 16	13 14 15 16	0	**
Set 5	17 18 19 20	17 18 19 20	*3	
Set 6	21 22 23 24	21 22 23 24	0	**

**\*Hang Platelets immediately upon receipt.**

**\*\* After every 2nd set of products issued, ABG, Lytes, and Lactic Acid will be checked**

1. The BBMT shall complete the following items on the transfusion record form to document the units being issued
    - a. Dispensing Information
    - b. Patient Demographics (if available)
    - c. Component, ABO type, and donor number or units issued
    - d. Ordering MD
  2. Transfusion Record completed with dispensing information as above is sent with the units and will be used to document the transfusions.
- G. Once the MTP is activated the designated runner will report to the blood bank to ensure prompt delivery to the requesting area.
- H. After a dose is sent, the next anticipated dose will be prepared until the protocol is deactivated.
- I. The treating physician or their designee receives the units and documents the following on the transfusion record:  
Received by  
Date  
Time received
- J. The Transfusionist completes the transfusion section of the transfusion record.
- K. If a Type and Screen specimen has not been received in the blood bank, each time that a prepared dose is sent, the BBMT will call to remind the service area that a Type and Screen blood specimen is still needed.
- L. AB plasma will not be prepared for the 3rd and subsequent doses until a type and screen specimen has been received and tested in the blood bank.
- M. Pooled CRYO equivalent to 10 units may be ordered as needed
- N. The coolers will be labeled with numbers that correspond with utilization.

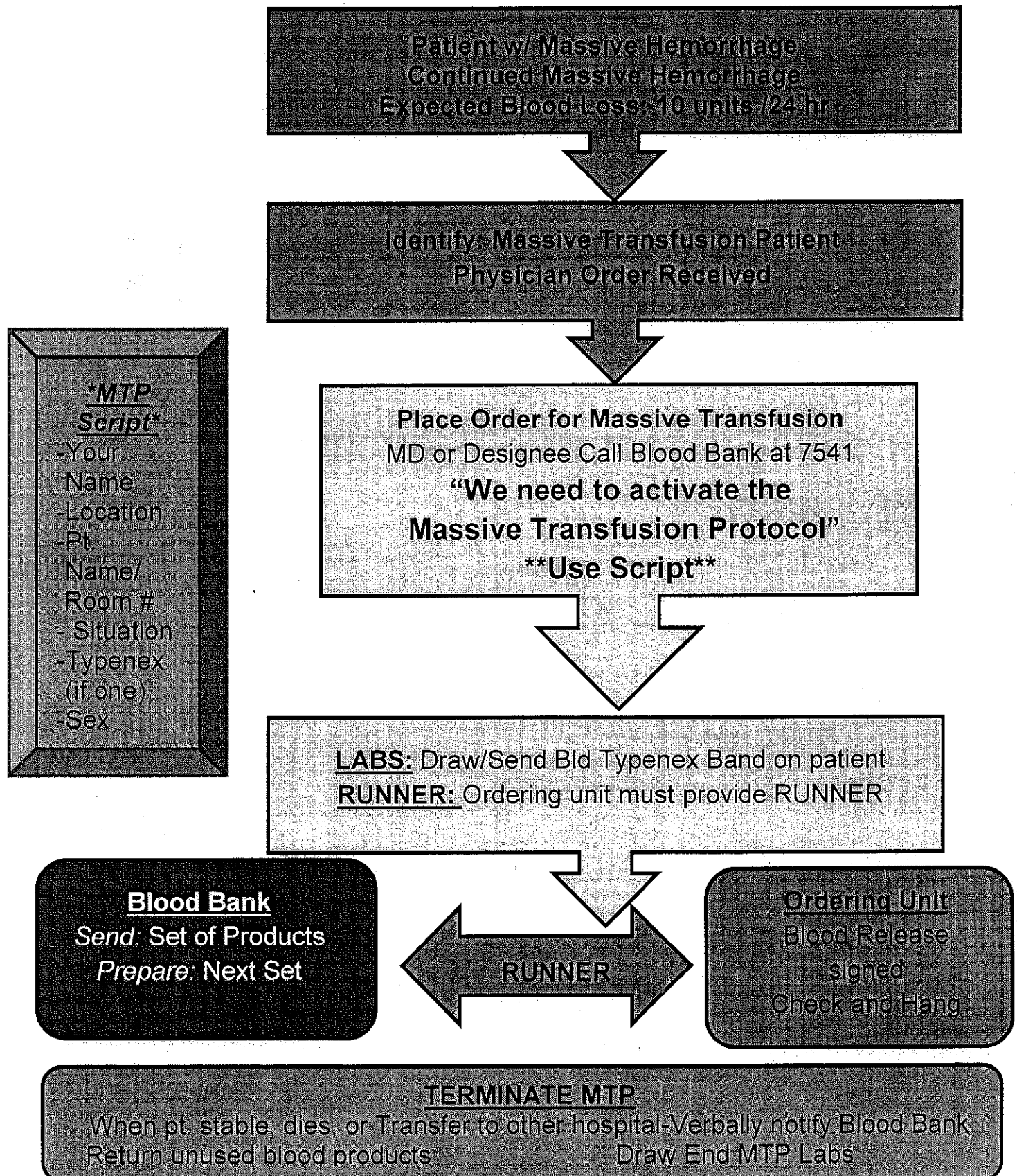
- O. RBC and Plasma should be delivered by a rapid infuser and through a blood warmer. Platelets and Cryoprecipitate should not be administered through a blood warmer. Labor & Delivery and ICU will contact the ED charge nurse at 3439 for assistance with rapid infuser.
- P. Resuscitation should be goal directed based on evaluation of baseline and ongoing lab findings and evidence of ongoing bleeding.
- Q. MTP may be discontinued by the physician based on control of bleeding and normalizing hemodynamic status, or upon recognition that further resuscitation is futile.
- R. The attending physician or designee must terminate the MTP by verbally notifying Blood bank staff.
- S. Post transfusion labs must be drawn and sent on surviving patients once MTP is terminated.
- T. All Unused blood products should be returned to the Blood Bank as soon as possible.
- U. Labcorp blood bank management will notify the Laboratory Medical Director within 72 hours if an Rh negative female less than 51 years old has been transfused with Rh positive red cells. The Laboratory Medical Director will be responsible for discussing possible therapeutic options for preventing Rh alloimmunization with the treating physician.
- V. MTP Compliance  
MTP compliance and appropriateness will be monitored by the Trauma Program, Quality, and Blood Bank. Patient outcomes and performance indicators will be monitored. Review will be submitted to the Trauma Peer Review, Trauma Operations Performance Improvement and the hospital Quality Committees.

#### REFERENCES:

- A. American College of Surgeons Committee on Trauma. (2013). Trauma Quality Improvement Program. *ACS TQIP Massive Transfusion in Trauma Guidelines*.
- B. American Society of Anesthesiologists. Committee on Blood Management. *Massive Transfusion Protocol for Hemorrhagic Shock*.

- C. Burtelow, M., Riley, E., Druzin, M., Fontaine, M., Viele, M., & Goodnough, L. (2007). How we treat: Management of life-threatening primary postpartum hemorrhage with a standardized massive transfusion protocol. *Transfusion* 47(9). 1564-72. doi: 10.1111/j.1537-2995.2007.01404.x
- D. Pacheco, L. D., Saade, G. R., Gei, A. F., & Hankins, G. D., (2011). Cutting-edge advances in the medical management of obstetrical hemorrhage. *American Journal of Obstetrics and Gynecology*. 205(6). 526-532. doi: 10.1016/j.ajog.2011.06.009
- E. Saule, I., & Hawkins, N. (2012). Transfusion practice in major obstetric hemorrhage: Lessons from trauma. *International Journal of Obstetric Anesthesia*. 21(1). 79-83.
- F. Eastern Association for Surgery of Trauma, American College of Critical Care Medicine of the Society of Critical Care Medicine Joint Taskforce. (2009). *Clinical Practice Guideline: Red blood cell transfusion in adult trauma and critical care*.

# Massive Transfusion Initiation Algorithm



## **Ratio of Products**

Attachment #2

	PRBC				Plasma				PLTS	LABS
Set 1	1	2	3	4	1	2	3	4	*1	
Set 2	5	6	7	8	5	6	7	8	0	**
Set 3	9	10	11	12	9	10	11	12	*2	
Set 4	13	14	15	16	13	14	15	16	0	**
Set 5	17	18	19	20	17	18	19	20	*3	
Set 6	21	22	23	24	21	22	23	24	0	**

**\*Hang Platelets immediately upon receipt.**

**\*\* After every 2nd set of products issued, ABG, Lytes, and Lactic Acid will be checked**

## **MTP Principles**


- Rapid Surgical Control
- Avoid overuse of crystalloids to minimize dilutional coagulopathy
- Continuously monitor patient temperature
- Avoid and treat hypothermia (use fluid warmer and Bair hugger if needed)
- Avoid and treat acidosis as needed: (ph< 7.2 treat with bicarbonate)
- Treat low ionized calcium for hemostatic and hemodynamic effects

## **Recommended Labs:**

Before initiating MTP: Have labs drawn if possible. Suggest BMP, CBC, PTT, PT/INR, ABG, Lactic Acid, Fibrinogen, Alcohol, Urine Tox, UA, Urine Hcg if have not already been completed.

During MTP: After every 2<sup>nd</sup> set of products issued, ABG, Lytes, and Lactic Acid will be checked.

After MTP: CBC, PT/INR, PTT, Fibrinogen, BMP, ABG, Lactic Acid.

	LC-Haute-QA-POL-026	F
	Title: Scope of Service	Revision 1

## SCOPE OF SERVICE

### MOST RECENT DOCUMENT REVISION

1	NA	New Policy

### SCOPE

#### SCOPE OF SERVICE

The laboratory's goal is to provide the Wabash Valley with the best possible laboratory services. Our mission is to produce meaningful clinical information from laboratory testing to help our customers practice cost effective medicine, and to assist them in identifying the appropriate clinical pathway to treat their patients.


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#### NATURE OF SERVICE

Labcorp's main laboratory facility in the Wabash Valley, is located on the lower level of Union Hospital (UH) -Terre Haute. LabCorp also operates the laboratory at Union Hospital-Clinton (UHC). Both locations are open 24 hours per day, seven days a week.

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The laboratory furnishes services that permit the hospital to comply with all applicable conditions of participation and standards of contracted services. The identification of the customers' needs is based on conversation with the customer, ongoing professional assessment and evaluation activities, customer satisfaction data, and requirements from regulatory agencies as well as internal requirements.

#### STAFFING PLAN

The department Director, Technical Consultants, Technical Supervisors, General Supervisors, Clinical Consultants, and all Testing personnel meet or exceed the personnel requirements of CLIA 88. Job responsibility statements that have been approved and signed by the Director and each staff member are maintained in each employee's file.

#### PRACTICE GUIDELINES

The laboratory utilizes the most stringent guidelines of CLIA 88, CAP, HFAP, NRC, & IOSHA as practice guidelines. The laboratory also ensures compliance with applicable state and local laws and regulations by obtaining information from multiple sources including hospital management, state medical societies, Indiana and Illinois state departments of health, and participation in professional clinical organizations

#### DOCUMENT APPROVAL

Documentation of approval of new and revised documents is maintained in master binders, annual review by staff maintained by departments with the control copies.

#### DOCUMENT REVISION HISTORY

Revision number	Section & Paragraph Affected	Summary of Changes as Compared to the Previous Version of the Document
		NA-New







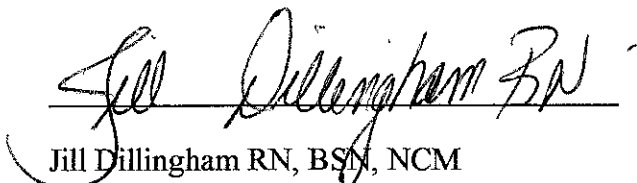
## Post-Anesthesia Care Unit

Union Hospital, Inc. Terre Haute is committed to providing care to the injured patient by providing staff available twenty four (24) hours a day. A call team is available within a 30 minute maximum response time.

- PACU is staffed 16 hours a day Monday through Friday in house, on call 8 hours
- Saturdays and Sundays OR is staffed 8 hours, on call 16 hours

The following equipment is available to the PACU:

- Adult and Pediatric code carts
- Arterial Line equipment
- Bair Hugger
- Hotline fluid warmer (nearby in OR)
- Level 1 Rapid infuser (nearby in OR)
- Ventilator capable
- All basic equipment (O2, suction, cardiac monitor, etc.)
- Ability to monitor internal temperature via foley catheter sensor
- Neuromonitoring capability



Jill Dillingham RN, BSN, NCM

Post Anesthesia Care/Endoscopy Unit

Union Hospital



**ADMINISTRATIVE MANUAL**  
**SUBJECT: ANATOMICAL GIFT OF ORGANS/TISSUE**

<b>HFAP CHAPTER:</b>	Patient Rights and Discharge Planning	<b>POLICY #:</b>	156
<b>UHTH REVIEWED:</b>	3/04; 12/06; 6/12	<b>ORIGINAL DATE:</b>	12/87
<b>UHC REVIEWED:</b>	5/99; 2/05; 2/06; 2/07; 12/07; 1/09; 1/10; 1/11; 6/12; 01/15	<b>CURRENT EFFECTIVE DATE:</b>	04/18/2013
<b>UHTH REVISED:</b>	7/96; 8/98; 6/99; 3/02; 1/04; 5/09; 4/13	<b>AUTHORIZED BY:</b>	
<b>UHC REVISED:</b>	11/99; 2/02; 1/04; 4/04; 12/11; 12/12; 4/13	VP of Patient Care, & UHC Administrator, MEC, BOD	

(Printed copies are for reference only. Please refer to the electronic copy for the latest version.)

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**POLICY:** Union Hospital, Inc. supports the right of patients to make an anatomical gift of organs/tissue and shall notify them of their right to do so as mandated by Indiana Code.

---

**PURPOSE:** To inform Medical Staff, Nursing Directors, Nursing Managers and Nursing Staff of the procedure when a family requests or agrees to an organ/tissue donation. In accordance with the Uniform Anatomical Gift Act, any individual of sound mind and eighteen (18) years of age or more may give all or any part of his/her body with the gift to take effect upon death.

**PROCEDURE:**

1. Agreements exist between Union Hospital Terre Haute, Union Hospital Clinton Hospital, and the Indiana Organ Procurement Organization to allow the Indiana Organ Procurement Organization to coordinate the identification of potential donors, inform families of potential donors of the option of organ, tissue, or eye donation, maintain potential donors while necessary testing and organ placement can take place and the retrieval of organs, tissue, or eyes. Copies of the contracts are available in Administration for both facilities.
2. The Indiana Organ Procurement Organization (IOPO) will act as the coordinator for Union Hospital, Inc. for the procurement of solid human organs, tissues, and eyes.
3. Criteria for organ, tissue, eye donors have been established by IOPO. The criteria are applied by IOPO personnel when they are notified by the hospital personnel of a death or imminent death. This criteria is then shared with hospital staff when a potential donor is identified.

**ADMINISTRATIVE MANUAL**  
**SUBJECT: ANATOMICAL GIFT OF ORGANS/TISSUE**  
**CURRENT EFFECTIVE DATE: 04/18/2013**

4. All deaths and imminent deaths must be reported to the Indiana Organ Procurement Organization (IOPO).

At Union Hospital Clinton, the Unit Manager Administrative Supervisor, or RN designated by the Unit Manager will contact IOPO at the time of death.

- a. Vented patients with GCS (Glasgow Coma Scale) of 5 or less.
  - b. Imminent death, as defined by IOPO, is death which is expected to occur within the next twenty-four (24) hours.
  - c. IOPO must be contacted prior to discontinuation of life support systems, including ventilators.
  - d. The registered nurse will report an imminent death situation or plans of discontinuation of life support systems by calling IOPO. At UHC the Unit Manager, Administrative Supervisor or RN designated by Administrative Supervisor will call IOPO to report an imminent death.
  - e. IOPO will give instructions as to if the patient is a potential donor and how to proceed with further care.
  - f. IOPO personnel are the designated requestor to approach the patient's family regarding potential donation.
5. The potential organ donor must be pronounced brain dead by a licensed physician. Brain death may be declared by:
- a. One (1) flat EEG showing no activity as well as an isotope flow scan which shows no arterial flow.  
-OR-
  - b. An isotope flow scan which shows no arterial flow.  
-OR-
  - c. Two (2) flat EEGs showing no activity (not under the influence of any depressant medication).  
-OR-
  - d. By clinical exam.
6. The physician attending the death shall certify the time of death and documentation of the pronouncement of brain death shall be placed in the doctor's progress notes and shall include notation of cessation of function and activity in the brain, as well as brain stem, and shall state the time of death.

## ADMINISTRATIVE MANUAL

SUBJECT: ANATOMICAL GIFT OF ORGANS/TISSUE

CURRENT EFFECTIVE DATE: 04/18/2013

7. IOPO will be notified of the brain death declaration. Any and all requested portions of the medical record will be shared with the IOPO personnel as deemed necessary to aid in determination of the potential donor.
8. The potential tissue/eye donor must be pronounced dead by the attending physician. IOPO must be contacted and will determine the suitability of the patient as a tissue/eye donor. If the patient is deemed to be a suitable donor, IOPO personnel will contact the family to obtain authorization. The Surgery Department will be notified if consent is obtained as to the probable time the retrieval of the tissues/eyes will occur.
9. If IOPO deems a potential donor situation is occurring, the Vigo, Vermillion or appropriate County Coroner) shall be notified before proceeding with family consultation.
10. IOPO personnel are the designated requestor to approach the patient's family regarding potential donation of organs or tissue.
11. Once authorization for donation has been received, the Department will be contacted and will readmit the donor as an outpatient. Admitting will issue patient labels which lists "Indiana Organ Procurement Organization" as the patient.

Under Indiana's Uniform Anatomical Gift Act (UAGA), if a person is medical suitable for donation and knowledge of the donor's legal declaration of an anatomical gift is known, Indiana law considers the declaration authorization to proceed with donation. Evidence of a declaration of gift may include, but not limited to a government issued driver's license or identification card or, through documentation from an appropriate anatomical gift registry. A driver's license that is suspended, revoked or expired does not change the validity of the declaration of the gift. Upon determination by the Organ Procurement Organization that a declaration of gift is valid, no further approval is required from the patient, patient's next of kin, agent or POA in order to proceed with the donation and /or tissue.

Only IOPO will offer the option of organ donation to the family. However, a team huddle will take place prior to IOPO being introduced to the family. The huddle can/should consist of IOPO, RN, Physician and a Chaplain/Family minister if they have been caring for the family. This will allow IOPO and the hospital to develop a plan for IOPO introduction to the family in addition to offering the option of donation. If the patient is donor designated, IOPO will inform the family of the patient's decision.

If the family states they do not want to honor their loved one's decision, IOPO and hospital give the family some time alone. IOPO will then ask for the House Supervisor/ Unit Supervisor to be informed of the family's decision. The appropriate supervisor will then proceed with notifying the appropriate hospital staff. This includes Security, Administration, Legal Department, public Relations, etc.

**ADMINISTRATIVE MANUAL**  
**SUBJECT: ANATOMICAL GIFT OF ORGANS/TISSUE**  
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After all appropriate hospital staff have been notified, IOPO and hospital will make a second attempt to discuss donation with the family. If the family continues to decline donation, IOPO and Union Hospital will inform the family one more time of the patient's decision and move forward with the organ donation process.

12. If no declaration has been made, or the patient is a minor, then consent must be obtained by the appropriate next of kin; therefore, an OPO trained and certified designated requestor shall be asked to discuss possible donation with the next of kin. If a patient is determined to be medically suitable for donation, the patient's next of kin will be approached about donation by an OPO trained and certified designated requestor, including procurement personnel. Prior to contacting the next of kin, the OPO trained and certified designated requestor will contact the attending physician and ascertain the family's knowledge of patient status. Written documentation, by the certified designated requestor shows that the family accepts or declines the opportunity for the patient to become an organ or tissue donor.
13. IOPO personnel will be on site to coordinate further care of the donor. All orders given by the IOPO personnel, under the direction of their Medical Director, will be followed. Union Hospital, Inc. medical staff, nursing staff, and other ancillary staff will be utilized as necessary. The Surgery and Respiratory Therapy Departments will be notified of impending procurement.
14. The funeral home of the patient's/family's request will be notified of the death and of the expected time of completion of the procurement. Once the procurement is completed, the funeral home will be contacted.
15. The appropriate County Coroner (Vigo, Vermillion) may determine an autopsy is necessary. This will be done once the procurement is completed.
16. IOPO will provide feedback to the donor's family, to the hospital staff, and to the donor's primary physician as to general information regarding subsequent placement of the organs/tissue/eyes.
17. Documentation of the notification to IOPO is made on the patient's chart. Monthly, a list of all deaths is sent to the Director of Medical Records and the Director of Critical Care. A list is received quarterly from IOPO showing all calls received from the hospital. A comparison is done to determine the hospital's compliance in reporting all deaths to IOPO. This comparative data is available in the Quality Management Department and is reported quarterly to the appropriate Committees.

**ADMINISTRATIVE MANUAL**

**SUBJECT: ANATOMICAL GIFT OF ORGANS/TISSUE**

**CURRENT EFFECTIVE DATE: 04/18/2013**

**RELATED**

**DOCUMENTS:** None

**REFERENCES:**

HFAP: Healthcare Facilities Accreditation Program: Requirements for Healthcare Facilities, 2012.

**DEFINITIONS:**

None



Union Hospital, Inc  
Donation Dashboard 2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	Goal	State Total
Overall Organ Authorization Rate														80.00%	79.57%
CMS Organ Authorization Rate														80.00%	83.33%
CMS Organ Conversion Rate														75.00%	82.67%
Total Organ Donors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	167
Organ Referral Rate	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	77.78%	100.00%	100.00%	98.52%	100.00%	97.84%	100.00%	97.84%
Unplanned Mentions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Organ Referrals	10	12	18	15	13	8	18	9	7	12	11	0	133	0	4900
Missed Organ Referrals	0	0	0	0	0	0	0	0	2	0	0	0	2	0	108
Late Organ Referrals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Tissue Authorization Rate	100.00%	33.33%	28.57%	25.00%	25.00%	62.50%	40.00%	50.00%	33.33%	44.44%	50.00%		42.86%	43.00%	40.44%
Eligible Tissue Donors	4	6	8	6	7	9	11	6	8	9	9	0	83		353
Total Tissue Donors	2	2	1	0	1	2	3	3	2	3	2	0	21		891
Total # Hospital Deaths	47	34	47	42	35	24	40	34	29	29	0	0	361		1628
Total # Reported to Indiana Donor Network	47	34	47	42	35	23	40	34	29	29	0	0	360		1688
Total Referral Rate	100.00%	100.00%	100.00%	100.00%	100.00%	95.83%	100.00%	100.00%	100.00%	100.00%			99.72%	100.00%	99.82%

ORGAN	2014	2015	STATE
Brain Dead Donors	1	0	150
DCD Donors	0	0	17
Total Organ Donors	1	0	167
Organ Declines	0	0	0
Organs Transplanted per Donor	3.00		3.51

TISSUE	2014	2015	STATE
Funeral Home Pick-ups	1	2	34
Coroner Donals	1	2	119
Tissue Declines	47	40	1879

Estimated # of lives saved  
Estimated # of lives enhanced 1050



Level III - Application

Diversion Log	Time on	Time off	Total Time on		Reason:
			Diversion		
Jan-15			0		
Feb-15			0		
Mar-15			0		
Apr-15			0		
May-15			0		
Jun-15			0		
Jul-15			0		
Aug-15			0		
Sep-15			0		
Oct-15			0		
Nov-15			0		
Dec-15			0		



**ADMINISTRATIVE MANUAL**  
**SUBJECT: AMBULANCE DIVERSION**

<b>HFAP CHAPTER:</b>	Administration of the Organizational Environment	<b>POLICY #:</b>	704
<b>REVIEWED:</b>	12/09; 4/13	<b>ORIGINAL DATE:</b>	1/2/08
<b>REVISED:</b>	11/10	<b>CURRENT EFFECTIVE DATE:</b>	4/24/2013
		<b>AUTHORIZED BY:</b>	VP of Patient Care

(Printed copies are for reference only. Please refer to the electronic copy for the latest version.)

**POLICY:** As a component of the hospital comprehensive plan (see Administrative policy # AD4-8), Surge Capacity Management Plan) to manage an unusual influx or a surge of patients, when the Emergency Department (ED) treatment area becomes overwhelmed with patients, exceeding the capacity for physicians and nurses to safely and adequately treat and monitor these patients, ambulances will be requested to divert to other area hospitals. Ambulance diversions are considered extreme actions, occurring only after the hospital has exhausted all internal mechanisms to relieve the overcrowding situation and the following criteria have been met. (as outlined in the Surge Capacity Management Plan, Administrative policy #AD 4-8)

**AMBULANCE  
DIVERSION CRITERIA:**

There are no monitored beds available in the ED to accept patients, and/or,

1. The ED is saturated with patients (waiting in the hall) and/or,
2. There are a number of in-patients being held in the ED and/or,
3. There is/are an unusual circumstances occurring in the ED ( ex. Utility failure) and/or,

Hospital diversion decisions must **NOT** be based on factors such as:

1. The protection of beds for elective cases.
2. The protection of beds for unforeseen needs (walk-ins, deteriorating condition of floor patients).
3. The desire not to call in overtime or on-call staff, or
4. The availability of ICU/CCU beds.

**ADMINISTRATIVE MANUAL**  
**SUBJECT: AMBULANCE DIVERSION**  
**CURRENT EFFECTIVE DATE: 4/24/2013**

**SATUS DEFINITIONS:**

***Open***

1. The hospital emergency department is open to all ambulance traffic.

***Closed to Ambulances***

1. The emergency department is functioning but needs to divert ambulance patients due to a temporary resource limitation.
2. One or more of the following shall be selected when placing the ED on Closed to Ambulances, and documented on "Ambulance Diversion Tracking Form"
  - a. ED is saturated/high volume
  - b. Holding in-patient admissions (number required in comments field)
  - c. No monitored beds available in the ED
  - d. Unusual circumstances (detail required in comments field)
3. The names of the Charge Nurse and Attending Physician approving this status are required in the comments field.
4. The hospital will still receive critical patients as defined in this policy.
5. Ambulances enroute to a hospital before diversion is posted will continue to that hospital.

***Special Diversion***

1. The facility needs to divert specific patients due to a temporary lack of resources necessary to treat these patients (i.e., CAT scan down). Detail required in comments field of "Ambulance Diversion Tracking Form".

***Forced Open***

1. The facility needs to divert ambulance patients, but communicating facilities are unable to accept diverted patients. This facility will continue to receive patients. This status is essentially for data tracking and should be updated as soon as a hospital no longer needs to divert patients, or as soon as other hospitals are able to accept diverted patients.
2. Forced Open facilities should notify their local EMS agency of their facilities situation.
3. Forced Open will automatically trigger a quality assurance review process.
4. The ED nurse supervisor at a facility on Forced Open status and its communicating facilities should complete the Forced Open Bed Capacity Form and make it available for the quality assurance review process.
5. If multiple hospital diversion exists, EMS supervisors must take an active role to balance the distribution of ambulance patients.

***Out of Service***

1. The emergency department has suffered structural damage, loss of power, an exposure threat or other condition that precludes the admission and care of any new patients in the emergency department. The actual status should be further defined in the comments section of the hospital "Ambulance Diversion Tracking Form".

**ADMINISTRATIVE MANUAL**  
**SUBJECT: AMBULANCE DIVERSION**  
**CURRENT EFFECTIVE DATE: 4/24/2013**

**AMBULANCE DIVERSION  
PROCEDURE:**

The following are steps the ED must follow to move into a diversion status:

1. When the ED Physician, in collaboration with the ED Nursing Care Director/Manager or Charge Nurse and Administrative Staff or Administrative House Supervisor, determines the need to place the ED on diversion they will:
  - a. Call and determine ability of each of the facilities (listed on form) to receive diverted patients. These calls represent one-to-one discussion between the ED physicians to determine the relative risk/benefit measure of patient diversion. Upon determination that one or more facilities can accept diverted patients the ED physician or designee will place the ED on diversion (closed to ambulances).
  - b. Notify the EMS Providers to place our facility on diversion, and document the time initiated on the "Ambulance Diversion Tracking Form". All Ambulance Diversions will trigger a quality assurance review.
  - c. If communicating facilities are **NOT** able to accept diverted patients, the ED may **NOT** go on diversion, but should notify EMS to place the hospital on **Forced Open** to represent the need for diversion but the inability of others to accept diverted patients. EDs in Forced Open status should communicate their situation to the local EMS agency or supervisor and should also complete a Forced Open Bed Capacity Form which will be used in the quality assurance process. Forced Open status automatically triggers a quality assurance review.
2. Hospitals in diversion status will still receive critical patients as defined in the appendix of this policy.
3. After diversion is initiated, hospital status must be updated at **least every two hours, with complete notification to EMS and surrounding hospitals of diversion status.** Otherwise, it will automatically expire.

**ADMINISTRATIVE MANUAL**  
**SUBJECT: AMBULANCE DIVERSION**  
**CURRENT EFFECTIVE DATE: 4/24/2013**

**RELATED DOCUMENTS:**

**Appendix I**  
**Definition of a Critical Patient**

These are guidelines and are not meant to be comprehensive and apply to this Ambulance Diversion Policy:

A critical patient is any patient:

1. Currently undergoing cardiopulmonary resuscitation (CPR) or has undergone successful CPR.
2. Who required pre-hospital endotracheal intubation and continues to deteriorate.
3. Who required pre-hospital ventricular pacing.
4. Whose vital signs are acutely deteriorating.
5. Who, despite pre-hospital treatment:
  - a. is in severe respiratory distress, resulting in severe hypoxemia as manifested by cyanosis or SpO<sub>2</sub> <90%
  - b. is severely hypotensive (for example, an adult with systolic BP < 80 mmHg), accompanied by or resulting in acutely altered level of consciousness
  - c. is in persistent malignant cardiac dysrhythmia, such as ventricular tachycardia or symptomatic bradycardia
6. Who, in the judgment of pre-hospital personnel, in consultation with on-line medical control, is in such a condition that cardiopulmonary failure is impending or bypassing the nearest hospital jeopardizes their condition.
7. Who is having cardiac symptoms.

A critical pediatric patient is any patient under the age of 14:

1. Currently undergoing cardiopulmonary resuscitation (CPR) or has undergone successful CPR
2. Who required pre-hospital endotracheal intubation.
3. Whose vital signs are acutely deteriorating.
4. Who, despite pre-hospital treatment:
  - a. is in severe respiratory distress, resulting in severe hypoxemia as manifested by cyanosis or SpO<sub>2</sub> <85%
  - b. is severely hypotensive accompanied by or resulting in acutely altered level of consciousness
5. Who, in the judgment of pre-hospital personnel, in consultation with on-line medical control, is in such a condition that cardiopulmonary failure is impending or bypassing the nearest hospital jeopardizes their condition.

**Patient Number:** AD 4.4

**FORCED OPENBED CAPACITY FORM**

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ FACILITY: \_\_\_\_\_  
CLINICAL MANAGER: \_\_\_\_\_ ATTENDING MD \_\_\_\_\_  
House Supervisor/Administrator: \_\_\_\_\_

**CAPACITY:**  
# OF ED BEDS: \_\_\_\_\_  
# OF PATIENTS IN HALLWAY: \_\_\_\_\_  
# OF ADMITTED PATIENTS IN ED \_\_\_\_\_  
  (MED SURG)      (TELE/SD)      (ICU)  
# OF PATIENTS IN WAITING ROOM \_\_\_\_\_  
# Of Patients in Triage \_\_\_\_\_

**STAFFING:**  
# OF RN's \_\_\_\_\_  
                             (SCHEDULED/BUDGETED)      (ACTUAL)  
ON-CALL RN CALLED IN?      Time of call: \_\_\_\_\_  
# of Attending ED Physicians on Duty: \_\_\_\_\_  
On-Call ED Physicians called in? Yes: \_\_\_\_ No: \_\_\_\_ Time of Call: \_\_\_\_\_  
Which communicating facilities  
notified? \_\_\_\_\_  
\_\_\_\_\_  
Reason for Denial of Diversion Request?  
\_\_\_\_\_  
\_\_\_\_\_

Which EMS Agencies Notified? \_\_\_\_\_  
Time EMS Notified: \_\_\_\_\_  
Please forward to the ER Director's Office.

Policy Number: AD 4-4

**Ambulance Diversion Tracking Form**

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Facility: \_\_\_\_\_

ED Physician: \_\_\_\_\_ ED Nurse Director/Manager or Charge: \_\_\_\_\_

Administrative Staff or Administrative House Supervisor: \_\_\_\_\_

**CAPACITY:**

# of ED Beds: \_\_\_\_\_ # of Patients in Hallway: \_\_\_\_\_

# of Admitted pts. waiting on bed in ED: \_\_\_\_\_ (ICU) \_\_\_\_\_ (M.S.) \_\_\_\_\_ (other) \_\_\_\_\_

# of pts. in Waiting Room \_\_\_\_\_

# of pts in Triage \_\_\_\_\_

**STAFFING:**

# of RN's \_\_\_\_\_ (scheduled/budgeted) \_\_\_\_\_ (actual)

On-Call RN Called In? \_\_\_\_\_ Time of call: \_\_\_\_\_

# of Attending ED Physicians on Duty: \_\_\_\_\_

On-Call ED Physicians called in? Yes: \_\_\_\_\_ No: \_\_\_\_\_ Time of call: \_\_\_\_\_

Which Communicating facilities notified? \_\_\_\_\_

Time facilities notified: \_\_\_\_\_

Which EMS agencies notified? \_\_\_\_\_

Time EMS notified: \_\_\_\_\_

Comments: (special diversions, status if structural damage or disaster)

\_\_\_\_\_

\_\_\_\_\_

Please forward to the ED Director's Office.

**ADMINISTRATIVE MANUAL**  
**SUBJECT: AMBULANCE DIVERSION**  
**CURRENT EFFECTIVE DATE: 4/24/2013**

**REFERENCES:**        NONE





A Union Health partner

**Trauma Services  
Performance Improvement  
& Patient Safety (PIPS)  
Plan 2015**

**This plan has been approved by:**

A handwritten signature in black ink, appearing to read "Mark O. Lynch", written over a horizontal line.

Mark O. Lynch, MD  
Trauma Medical Director

6/30/15

Date

A handwritten signature in black ink, appearing to read "Kelly Mills RN BSN CEN", written over a horizontal line.

Kelly Mills, RN BSN CEN  
Trauma Program Manager

6/30/15

Date

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## **I. Purpose**

Union Hospital's Trauma Performance Improvement & Patient Safety (PIPS) plan is to evaluate, measure, and improve processes and outcomes of care to the injured. The trauma service and hospital are dedicated to providing specialized, effective care to all injured patients brought to this facility.

## **II. Mission & Vision of Trauma Program**

Our mission is to serve our community by providing exceptional healthcare that is driven by a performance improvement process that ensures all injured patients gain access to the appropriate level of care in a safe, timely, and coordinated manner.

## **III. Authority/Scope**

Trauma performance improvement is under the direction of the Trauma Medical Director (TMD) as delegated by the Medical Staff. The trauma program has the authority to monitor all events that occur during a trauma-related episode of care when admitted to the institution. The TMD and Trauma Program Manager (TPM) address performance issues which involve multiple services and departments. The TMD leads the Trauma PIPS process through case reviews, review of variances, filters, complications, and complaints. The TMD will decide judgment and corrective action to be taken.

## **IV. Credentialing**

Provider credentialing occurs through the Union Hospital Medical Staff Services. The TMD will do an initial and annually review of credentials for trauma call. Coordination of the documentation of physician and nurse credentialing will be a collaborative effort between the TMD, TPM, in conjunction with the Medical Staff Office.

## **V. Trauma Patient Population**

The trauma patient population that will be monitored and care evaluated are correlated with the American College of Surgeons and Indiana Registry inclusion criteria. The trauma patient is defined as any patient whose presents no more than 30 days prior to initial injury who has 1.) discharge injury diagnoses codes of 800.00-959.9, excluding 905-909.9 (late effects of injury), 910-924.9 (superficial injuries: blisters, contusions, abrasions, insect bites), or 930-939.9 (foreign bodies – ingested, eye, etc.), minor injuries such as isolated lacerations, or sprains, that had at least a 23 hr admission, 2) Trauma related deaths (DOA, DIED, Death in hospital), 3.) Transfer into or out of hospital, 4.) Trauma Team Activations.

## **VI. Data Collection & Analysis**

### **A. Process for Data Collection**

Data and referrals for the Trauma PIPS process are collected concurrently and retrospectively. Specifically, sources of data and referrals include but are not limited to the following:

- Hospital Trauma Registry
- Daily ED Log
- Hospital Admission Report
- Trauma Program Manager daily rounds
- Referrals from staff involved in care of the trauma patient
- Hospital Information System / Hospital Quality Management
- Email communications
- Referrals from Risk Management and Patient Safety

#### B. Data Analysis

Continuous evaluation and monitoring of trauma care delivery is based on national, regional and local standards of trauma care. These standards are used to trend events, benchmark performance, identify cases for committee review, as well as offering an alternative for evaluating processes, outcomes, and consistency of care. All trauma related morbidity and mortality are reviewed by the TMD & TPM. Selected cases are then reviewed by the Trauma Peer Review Committee.

#### C. Validation

1. The Trauma Registry contains an edit check that validates >200 fields upon saving the case. Each of these edit checks are analyzed, confirmed and corrected on each case.
2. Reporting: Many reports are run from different perspectives and are then analyzed and validated against each other. Monthly, quarterly and ad hoc reporting occasionally identify a mismatch of data. These data elements are confirmed via the pt record and corrected within the Trauma Registry.
3. Re-abstraction: Approximately 5% of cases, including all mortalities, are re-abstracted each month. This is accomplished utilizing a predefined set of important data fields including confirmation of appropriate use of e-codes, ICD 9 codes and injury scoring. Each validated case is reviewed with the corresponding registrar for discussion and educational purposes.

### VII. Process for Monitoring Compliance

1. All trauma patients that meet criteria for entry into the trauma registry are monitored for compliance with or adherence to the standards of quality trauma care.
2. Death Reviews-Trauma patient deaths are reviewed as they relate to trauma care and trauma system issues. Morbidities and mortalities are evaluated as to whether their occurrence is disease, provider or system related. A disease related morbidity or death is an anticipated sequel of a disease, medical illness, or injury. A provider associated complication results from delays or errors in treatment provided by physicians, nurses, or emergency medical service. The case review categorizes errors in technique, judgment, treatment, etc. and is used to determine judgment.

- Hospital Trauma Registry
- Daily ED Log
- Hospital Admission Report
- Trauma Program Manager daily rounds
- Referrals from staff involved in care of the trauma patient
- Hospital Information System / Hospital Quality Management
- Email communications
- Referrals from Risk Management and Patient Safety

#### B. Data Analysis

Continuous evaluation and monitoring of trauma care delivery is based on national, regional and local standards of trauma care. These standards are used to trend events, benchmark performance, identify cases for committee review, as well as offering an alternative for evaluating processes, outcomes, and consistency of care. All trauma related morbidity and mortality are reviewed by the TMD & TPM. Selected cases are then reviewed by the Trauma Peer Review Committee.

#### C. Validation

1. The Trauma Registry contains an edit check that validates >200 fields upon saving the case. Each of these edit checks are analyzed, confirmed and corrected on each case.
2. Reporting: Many reports are run from different perspectives and are then analyzed and validated against each other. Monthly, quarterly and ad hoc reporting occasionally identify a mismatch of data. These data elements are confirmed via the pt record and corrected within the Trauma Registry.
3. Re-abstraction: Approximately 5% of cases, including all mortalities, are re-abstracted each month. This is accomplished utilizing a predefined set of important data fields including confirmation of appropriate use of e-codes, ICD 9 codes and injury scoring. Each validated case is reviewed with the corresponding registrar for discussion and educational purposes.

### VII. Process for Monitoring Compliance

1. All trauma patients that meet criteria for entry into the trauma registry are monitored for compliance with or adherence to the standards of quality trauma care.
2. Death Reviews-Trauma patient deaths are reviewed as they relate to trauma care and trauma system issues. Morbidities and mortalities are evaluated as to whether their occurrence is disease, provider or system related. A disease related morbidity or death is an anticipated sequel of a disease, medical illness, or injury. A provider associated complication results from delays or errors in treatment provided by physicians, nurses, or emergency medical service. The case review categorizes errors in technique, judgment, treatment, etc. and is used to determine judgment.

3. Audit Filters/Core Measures-as defined by the ACS and the trauma program are monitored. (See attachment #1)
4. Complications-Complications that occur in the trauma patient are recorded in the hospital Trauma Registry. The Trauma Program will review complications from injury or treatment that significantly affect patient outcome. Those complications that significantly affect patient outcome will be tracked and reported quarterly to the Trauma PR Committee. The Trauma PR Committee makes appropriate referrals and recommendations. Major complications will be reported on a quarterly basis and monitored for trend analysis. (See attachment #4)
5. Trauma Systems - Operational Issues (Internal)-All identified issues that are not provider related are reviewed in the Trauma Operational Process Performance Improvement (TOPPI) Committee. This operational committee meets is multidisciplinary. The committee membership is as follows:
  - Trauma Medical Director
  - Trauma Program Manager
  - Nurse Manager, Emergency Department
  - Director, Respiratory Therapy
  - Emergency Medicine-Trauma Liaison
  - Director, Operating Room
  - Director, ICU
  - Manager, Pathology & Laboratory
  - Trauma Registrar
  - Director, Imaging
  - Director, EMS & Risk Management
  - Director, Medical Surgical Services
  - Manager, Quality
6. Trauma Systems Issues (External to the trauma hospital)-Issue that occur external to this facility e.g., prehospital care related to trauma patients received at this hospital are reviewed on a case by case basis by the Trauma Program. The Union Hospital Trauma PI Plan allows for close observation and review of prehospital trauma care. If necessary, referral to the EMS Medical Director or appropriate provider agency is made. All attempts will be made to work with the system for problem resolution and loop closure. When the Trauma Program Manager has completed the review, a report will be given to the TOPPI committee if necessary. The TOPPI may recommend further action as needed, e.g., education, policy, and counseling.

### **VIII. Review Process**

1. First Level Review:  
The Trauma Program Manager (TPM) or designee will do the initial case review. If the 1<sup>st</sup> Level review is completed, affirming that clinical care is appropriate and no provider or systems issues are identified, the case does not require 2<sup>nd</sup> Level or formal committee review. **OR** after review of all the pertinent information the TPM may determine that the issue should be addressed at the next level by the TMD.

2. Second Level Review:

The second level of review is done by the TPM and the TMD. A case in which a 2<sup>nd</sup> level review is required is when issues in clinical care, provider or systems issues are evident that require the Trauma Director's expertise and judgment. They may begin further investigation, implement action without formal referral to a peer review or system committee, or decide to send it to the appropriate PI committee or to a hospital department for further investigation/peer review and ask for a follow-up.

3. Third Level Review:

The Trauma Program Manager and Trauma Medical Director perform an initial case review in preparation for the Committee meeting identifying all background information, pertinent protocols (or lack) and specifying all individual issues to be discussed. The issue is then formally reviewed by the Trauma PI Committee(s) (TPRC and/or TOPPI). The Committee may communicate with individual physicians, other clinical sections or departments to request additional data or give input. Determination of judgments will be made by the committee using the following criteria.

**IX. Determination of Judgment**

The committee will render a judgment regarding the appropriateness of the issue and mortality being reviewed. Each issue will be placed into one of the following categories:

- a. Unanticipated mortality with opportunity for improvement
- b. Anticipated mortality with opportunity for improvement
- c. Mortality without opportunity for improvement

**X. Documentation of Analysis and Evaluation**

The comprehensive PI program includes accurate and confidential documentation of ongoing monitoring, corrective action, progress, and re-evaluation. Information is handled in a strictly confidential manner.

**XI. Referral Process for Investigation or Review**

The cases determined to require further investigation by the 1st or 2nd level or a judgment/rating determination by the TPRC may be referred to the appropriate hospital department via appointed liaisons, committee or department chairman for review. The TPRC and/or Trauma Medical Director will then review the response of the referral for follow-up planning. (See attachment #3)

**XII. Trauma PI Committees Structure:**

1. Trauma Peer Review Committee (TPRC) is a multidisciplinary peer review committee functioning under the Medical Quality Committee comprised of all trauma surgeons, the TPM and representatives from Orthopedic Surgery, Anesthesia, Emergency and Neurosurgery Departments. Additional attendees are





invited ad hoc. The Committee meets to evaluate care of the trauma patient, identifying issues for review, complications, deaths, audit filters, system issues, and determines compliance with standards of care. Recommendations and action plans will be made when areas needing improvement are identified. Cases that require further follow up or action are referred to the Chief of Medical Staff or appropriate department. Each committee member is responsible for acting as a conduit for information to their respective departments / divisions and will initiate loop closure and participate in corrective action for issues pertaining to their department / division. The Liaisons are responsible for providing documentation of loop closure. The Trauma Peer Review Committee meets quarterly with 50% attendance requirement of peer review representatives.

2. Trauma Program Operational Process Performance Improvement (TOPPI) Committee includes a multidisciplinary team representing all phases of care provided to the injured patient including pre-hospital. Trauma program systems and process related issues are reviewed. The TPOPP Committee meets quarterly.

### **XIII. Operational Staff Responsible for the Trauma PI Program**

1. The Trauma Medical Director (TMD) and Trauma Program Manager (TPM) maintain the Trauma PI Process and address performance issues, which involve multiple services and departments.
2. The Trauma Medical Director leads the Trauma PI process through chairing the Trauma PI committees and for initial review of all physician related issued including deaths and screened complications. The Trauma Medical Director will decide the issue judgment and corrective action to be taken.
3. The Trauma Program Manager is responsible for identification of issues and their initial validation, maintenance of trauma PI database/files and protection of their confidentiality, facilitating data trends and analysis, and surveillance of protocols/guidelines/clinical paths.
4. The TPM and the Trauma Registrar abstract data from the patient's chart concurrently, identifies and reports complications, variances in care, complaints and opportunities for improvement from time of patient injury through hospital rehabilitation.
5. The Trauma Registrar is responsible for report writing, utilizing the Trauma Registry as the core source of information. The registrar will enter data into the Trauma Registry and assigns AIS codes, ICD-9 Codes and validates all injured patients who meet inclusion criteria.
6. The Trauma Program Manager and the Trauma Registrar screen trauma cases for physician review. The TPM documents issue, judgment, and action in patient's or trauma registry information. The Trauma Medical Director and Trauma Program Manager review trauma cases with complications, variances, or complaints. The TMD will present appropriate cases to the Trauma Peer Review Committee.

#### **XIV. Corrective Action Planning**

The Trauma Medical Director oversees all corrective action. Structured plans may be created by any of the Trauma PI team members or committees in an effort to improve sub-optimal performance identified through the PI process. Potential corrective action categories are:

- Education
- Referral to peer group
- Trending
- Focus Audit
- Supervisor Review
- Protocols
- Counseling
- Privileges or credentials
- External Review

#### **XV. Confidentiality Protection**

The essential aspects of control to Protected Health Information (PHI) include the following measures:

1. Use of a locked file or room for all relevant information.
2. Provision of a confidentiality statement/agreement for all participants in PI activities, re-affirmed annually.
3. Sanction for any breaches of confidentiality.
4. Dispose of all extraneous copies of PI documentation. i.e.: Medical Case Reviews, in 'Confidential' bins.
5. Computer generated PI documentation (Medical minutes and case reviews) may only be accessed via user ID and password protection.
6. Use of security procedures when mailing, emailing or faxing PI / PHI documentation in compliance with hospital confidentiality policy of PHI. This is adhered to by:
  - Addressing all correspondence to an assigned person rather than an agency
  - Clearly marking all letters "confidential"
  - Faxing information only to secured locations

#### **XVI. Loop Closure and Re-evaluation**

Any identified issues will be subject to Level 1, 2 or 3 reviews which may result in the formation of an action plan. In order to "close the PI loop", the outcome of the corrective action plan will be monitored for the expected change and re-evaluated. A PI issue will not be considered to be closed until the re-evaluation process demonstrates a measure of performance or change at an acceptable level. An acceptable level may be determined by frequency tracking, benchmarking, and variance analysis as decided by the Trauma Medical Director and/or TPR Committee. Loop closure will be reported to the TMD and a determination made regarding periodic or continuous monitoring.

## **XVII. Integration into Hospital Performance Improvement Process**

The Trauma PI program practices a multi-disciplinary and multi-departmental approach to reviewing the quality of patient care across all departments and divisions. The TRPC and TOPPI committees are integrated with and collaborate with the appropriate performance improvement committees as needed. The Trauma PI program will report activity through the Quality Medical Staff committee on a regular basis. (See attachment #3)

## **XVIII. Attachments**

### **Attachment #1**

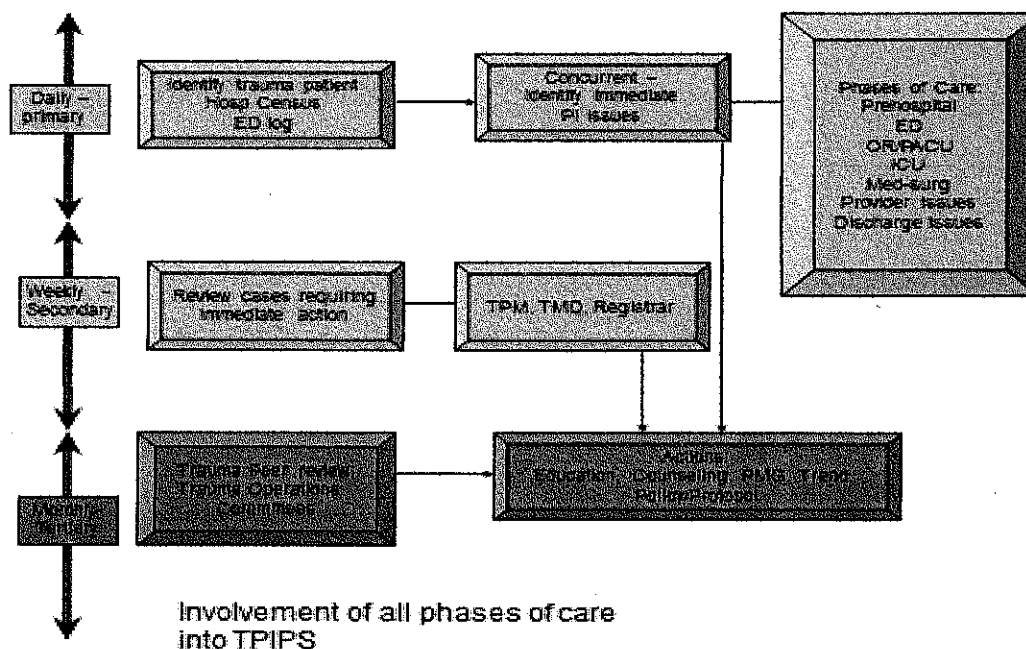
### **Audit Filters/Core Measures**

1. **Mortality-** All trauma related mortalities are systematically reviewed and categorized by Injury Severity Scale groupings. Those with mortality with opportunities for improvement (OFI) are identified for TPRC.
2. **Burns-** All burn patients transferred in or out will be reviewed for appropriateness of care.
3. **Trauma Surgeon response to the Emergency Department-** Highest level of trauma activations will be reviewed for on call response within 30 minutes of patient arrival, variances documented reason for delay, and opportunities for improvement with corrective actions. Surgeon response to other levels of TTA will be reviewed.
4. **Trauma Activation criteria-** Activation criteria will be reviewed annually.
5. **ED Over/Under Triage-** Trauma activation rates of over triage and under triage are reviewed monthly utilizing a matrix method.
6. **Consultation response-** Response to time critical injuries by consultants will be reviewed for delay and OFI.
7. **Trauma patient admissions to Non-Surgical Service-** All non-surgical service trauma admissions are reviewed and assessed for appropriateness of admission, OFI, or adverse outcomes.
8. **Pediatric trauma care-** All pediatric (14 and younger) admissions will be reviewed for timeliness and appropriateness of care.
9. **Pediatric- Outcomes in head injury-** All pediatric head injuries cases will be reviewed for outcomes.
10. **Transfers out-** All acute transfers out will be reviewed for rationale of transfer, appropriateness of care, and OFI with follow up obtained from the receiving trauma center.
11. **Trauma center diversion-** Any instance of diversion will be reviewed.
12. **Appropriate Neurosurgical care at Level III Trauma Center-** All cases with neurologic injury will be reviewed for timeliness of response and appropriateness of care. Compliance of Brain Trauma Foundation guidelines and unavailability of neurosurgeon on call will be monitored.
13. **Anesthesia availability-** anesthesia support will be monitored for delays.
14. **Operating Room availability-** OR availability will be monitored for delay or adverse outcome.
15. **Operating Room and Post anesthesia care unit response time-** response times for OR and PACU on call will be monitored for delay or OFI.

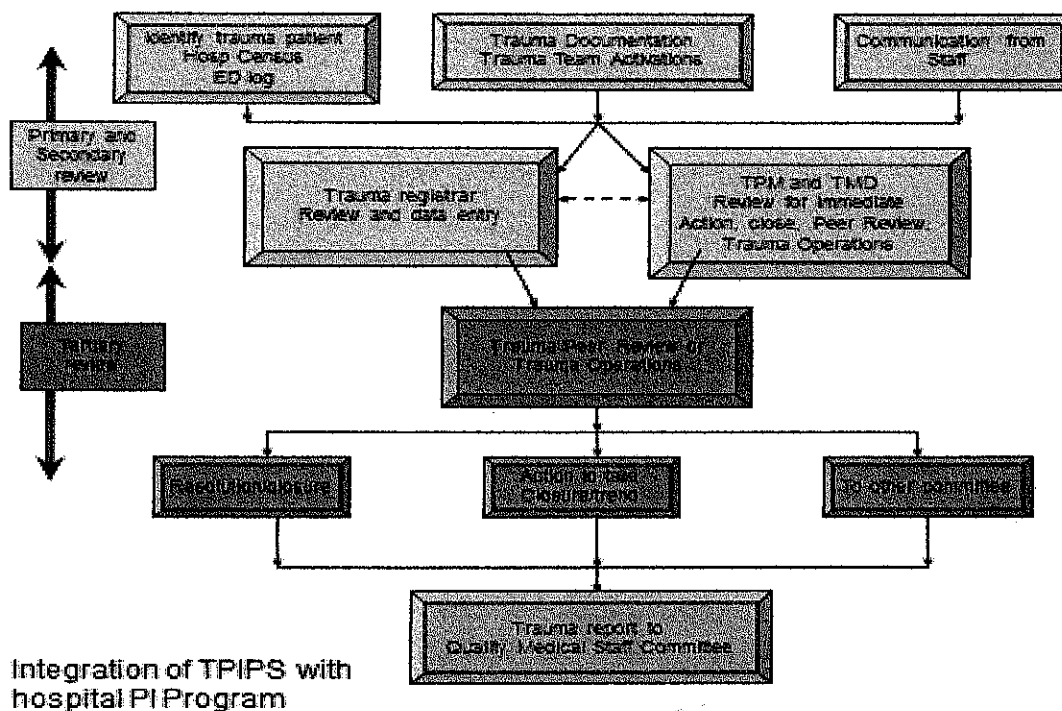
16. **Change of interpretation of radiologic studies**-The rate of change in interpretation of radiologic studies will be monitored.
17. **Organ Donation Rate**-Hospital organ donation rate will be reviewed.
18. **Trauma Registry record completion**-The percentage of registry records within 2 months of discharge will be calculated and reviewed.
19. **Trauma Peer Review Committee**-Attendance rates will be monitored for TMD, general surgeons, and specialty liaisons.
20. **Missing EMS Reports**-Presence of EMS run sheet will be monitored.
21. **ED LOS > 2 hours for transfers out**-Transfers will be monitored for ED Length of Stay and reviewed for variance or OFI.
22. **ED Nursing Documentation inadequate**-Nursing documentation will be reviewed on all trauma cases with OFI identified.
23. **Hospital Length of Stay**-Mean Length of stay for hospital admissions minus ICU will be monitored.
24. **ICU Length of Stay**-Mean length of stay for ICU admission will be monitored.
25. **Penetrating Trauma**-Percentage of penetrating trauma will be monitored.
26. **Overall Complication Rate**-Total complication rate will be monitored.
27. **Compliance with practice Guidelines**-Compliance with trauma practice guidelines will be reviewed and monitored.
28. **GCS<8 left ED before definitive airway established**-Comatose patient leaving the ED before airway could be established.
29. **Blood Products Issues**-Any issues with emergent release of blood will be reviewed.
30. **Rapid Reversal anticoagulants**-All rapid reversal of anticoagulants for patients with a positive head CT will be monitored.
31. **Hospital Readmission within 30 days**-Readmission within 30 days of initial hospitalization related to original trauma.

# Trauma Program PIPS Plan

## Attachment #2 Review



## Attachment #3 Integration in Hospital PI



Attachment # 4  
Complications 2015

Complications Following Traumatic Injury
Acute Kidney Injury
ALI/ARDS, Acute resp distress syndrome
Cardiac arrest w/ CPR
Catheter-Related Blood Stream Infection
Decubitus ulcer
Deep Surgical site infection, SSI
DVT, deep vein thrombosis
Drug / alcohol withdrawal syndrome
Extremity Compartment Syndrome
Graft / prosthesis / flap failure
Myocardial infarction
Organ/Space Surgical Site Infection
Osteomyelitis
Pulmonary Embolism PE
Pneumonia
Severe Sepsis
Stroke / CVA
Surgical site infection, superficial
Urinary Tract Infection
Unplanned admission/return to ICU
Unplanned intubation
Unplanned return to OR

## COMPLICATION DEFINITIONS

**Acute Kidney Injury:** Acute kidney injury, AKI (stage 3), is an abrupt (within 48 hours) reduction of kidney function defined as:

Increase in serum creatinine (SCr) of more than or equal to 3x baseline

or;

Increase in SCr to  $\geq 4\text{mg/dl}$  ( $\geq 353.3\mu\text{mol/l}$ )

or;

Patients  $>18$  years with a decrease in  $eGFR$  to  $< 35\text{ ml/min per } 1.73\text{ m}^2$

or;

Reduction in urine output of  $< 0.3\text{ ml/kg/hr}$  for  $\geq 24\text{ hrs.}$

or;

Anuria for  $\geq 12\text{ hrs.}$

or;

Requiring renal replacement therapy (e.g. continuous renal replacement therapy (CRRT) or periodic peritoneal dialysis, hemodialysis, hemofiltration, or hemodiafiltration).

NOTE: If the patient or family refuses treatment (e.g., dialysis,) the condition is still considered to be present if a combination of oliguria and creatinine are present.

Erythema at the entry site of the central line or positive cultures on the tip of the line in the absence of positive blood cultures is not considered a CRBSI.

**Decubitus ulcer:** Any partial or full thickness loss of dermis resulting from pressure exerted by the patient's weight against a surface. Deeper tissues may or may not be involved. Equivalent to NPUAP Stages II – IV and NPUAP “unstageable” ulcers. EXCLUDES intact skin with non-blanching redness (NPUAP Stage I,) which is considered reversible tissue injury.

**Deep surgical site infection:** A deep incisional SSI must meet one of the following criteria: Infection occurs within 30 days after the operative procedure if no implant is left in place or within one year if implant is in place and the infection appears to be related to the operative procedure and involves deep soft tissues (e.g., fascial and muscle layers) of the incision; AND patient has at least one of the following:

- Purulent drainage from the deep incision but not from the organ/space component of the surgical site of the following: A deep incision spontaneously dehisces or is deliberately opened by a surgeon and is culture-positive or not cultured when the patient has at least one of the following signs or symptoms: fever ( $>38^{\circ}\text{C}$ .) or localized pain or tenderness. A culture negative finding does not meet this criterion.
- An abscess or other evidence of infection involving the deep incision is found on direct examination, during reoperation, or by histopathologic or radiologic examination.
- Diagnosis of a deep incisional SSI by a surgeon or attending physician.

NOTE: There are two specific types of deep incisional SSIs:

- Deep Incisional Primary (DIP): a deep incisional SSI that is identified in a primary incision in a patient that has had an operation with one or more incisions (e.g., C section incision or chest incision for CBGB)
- Deep Incisional Secondary (DIS): a deep incisional SSI that is identified in the secondary incision in a patient that has had an operation with more than one incision (e.g., donor site [leg] incision for CBGB.)

REPORTING INSTRUCTION: Classify infection that involves both superficial and deep incision sites as deep incisional SSI.

**Deep Vein Thrombosis (DVT):** The formation, development, or existence of a blood clot or thrombus within the vascular system, which may be coupled with inflammation. This diagnosis may be confirmed by a venogram, ultrasound, or CT. The patient must be treated with anticoagulation therapy and/or placement of a vena cava filter or clipping of the vena cava.

**Drug or alcohol withdrawal syndrome:** A set of symptoms that may occur when a person who has been habitually drinking too much alcohol or habitually using certain drugs (e.g., narcotics, benzodiazepine) experiences physical symptoms upon suddenly stopping consumption. Symptoms may include: activation syndrome (i.e., tremulousness, agitation, rapid heartbeat and high blood pressure,) seizures, hallucinations or delirium tremens.

**Extremity compartment syndrome:** A condition not present at admission in which there is documentation of tense muscular compartments of an extremity through clinical assessment or direct measurement of intracompartmental pressure requiring fasciotomy. Compartment syndromes usually involve the leg but can also occur in the forearm, arm, thigh, and shoulder.

Record as a complication if it is originally missed, leading to late recognition, a need for late intervention, and has threatened limb viability.

**Graft/prosthesis/flap failure:** Mechanical failure of an extracardiac vascular graft or prosthesis including myocutaneous flaps and skin grafts requiring return to the operating room or a balloon angioplasty.

**Myocardial infarction:** A new acute myocardial infarction occurring during hospitalization (within 30 days of injury.)

**Organ/space surgical site infection:** An infection that occurs within 30 days after an operation and infection involves any part of the anatomy (e.g., organs or spaces) other than the incision, which was opened or manipulated during a procedure; and at least one of the following, including:

- Purulent drainage from a drain that is placed through a stab wound or puncture into the organ/space.
- Organisms isolated from an aseptically obtained culture of fluid or tissue in the organ/space.
- An abscess or other evidence of infection involving the organ/space that is found on direct examination, during reoperation, or by histopathologic or radiologic examination
- Diagnosis of an organ/space SSI by a surgeon or attending physician.

**Osteomyelitis:** Defined as meeting at least one of the following criteria:

- Organisms cultured from bone.
- Evidence of osteomyelitis on direct examination of the bone during a surgical operation or histopathologic examination.
- At least two of the following signs or symptoms with no other recognized cause:

- Fever (38° C)
- Localized swelling at suspected site of bone infection
- Tenderness at suspected site of bone infection
- Heat at suspected site of bone infection
- Drainage at suspected site of bone infection

AND at least one of the following:

- Organisms cultured from blood positive blood antigen test (e.g., H. influenza, S. pneumonia)
- Radiographic evidence of infection, e.g., abnormal findings on x-ray, CT scan, magnetic resonance imaging (MRI,) radiolabel scan (gallium, technetium, etc.)

**Pulmonary embolism:** A lodging of a blood clot in a pulmonary artery with subsequent obstruction of blood supply to the lung parenchyma. The blood clots usually originate from the deep leg veins or the pelvic venous system. Consider the condition present if the patient has a V-Q scan interpreted as high probability of pulmonary embolism or a positive pulmonary arteriogram or positive CT angiogram.

**Pneumonia:** Patients with evidence of pneumonia that develops during the hospitalization and meets at least one of the following two criteria:

- Criterion #1: Rales or dullness to percussion on physical examination of chest AND any of the following:
- New onset of purulent sputum or change in character of sputum.



- Organism isolated from blood culture.
- Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy.
- Criterion #2: Chest radiographic examination shows new or progressive infiltrate, consolidation, cavitation, or pleural effusion AND any of the following:
  - New onset of purulent sputum or change in character of sputum.
- Organism isolated from the blood.
- Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy
- Isolation of virus or detection of viral antigen in respiratory secretions
- Diagnostic single antibody titer (IgM) or fourfold increase in paired serum samples (IgG) for pathogen
- Histopathologic evidence of pneumonia

**Severe sepsis:** Sepsis and/or Severe Sepsis defined as an obvious source of infection with bacteremia and two or more of the following:

- Temp  $>38^{\circ}\text{C}$  or  $<36^{\circ}\text{C}$
- WBC count  $>12,000/\text{mm}^3$ , or  $>20\%$  immature (source of infection)
- Hypotension – (Severe Sepsis)
- Evidence of hypo perfusion: (Severe Sepsis)
- Anion gap or lactic acidosis or Oliguria, or Altered mental status.

**Stroke/CVA:** A focal or global neurological deficit of rapid onset and NOT present on admission. The patient must have at least one of the following symptoms:

- Change in level of consciousness
- Hemiplegia
- Hemiparesis
- Numbness or sensory loss affecting on side of the body
- Dysphasia or aphasia
- Hemianopia
- Amaurosis fugax
- Other neurological signs or symptoms consistent with stroke

AND:

- Duration of neurological deficit  $\geq 24\text{ h}$

OR:

- Duration of deficit  $<24\text{ h}$ , if neuroimaging (MR, CT, or cerebral angiography) documents a new hemorrhage or infarct consistent with stroke, or therapeutic intervention(s) were performed for stroke, or the neurological deficit results in death

AND:

- No other readily identifiable non-stroke cause, e.g., progression of existing traumatic brain injury, seizure, tumor, metabolic or pharmacologic etiologies, is identified

AND:

- Diagnosis is confirmed by neurology or neurosurgical specialist or neuroimaging procedure (MR, CT, angiography,) or lumbar puncture (CSF demonstrating intracranial hemorrhage that was not present on admission.) Although the neurologic deficit must not present on admission, risk factors predisposing to stroke (e.g., blunt cerebrovascular injury, dysrhythmia) may be present on admission.

**Superficial surgical site infection:** An infection that occurs within 30 days after an operation and infection involves only skin or subcutaneous tissue of the incision and at least one of the following:

- Purulent drainage, with or without laboratory confirmation, from the superficial incision.
  - Organisms isolated from an aseptically obtained culture of fluid or tissue from the superficial incision.
  - At least one of the following signs or symptoms of infection: pain or tenderness, localized swelling, redness, or heat and superficial incision is deliberately opened by the surgeon, unless incision is culture-negative.
  - Diagnosis of superficial incisional surgical site infection by the surgeon or attending physician.
- Do not report the following conditions as superficial surgical site infection:
- Stitch abscess (minimal inflammation and discharge confined to the points of suture penetration.)
  - Infected burn wound.
  - Incisional SSI that extends into the fascial and muscle layers (see deep surgical site infection.)

**Urinary Tract Infection:** An infection anywhere along the urinary tract with clinical evidence of infection, which includes at least one of the following symptoms with no other recognized cause:

- Fever  $\geq 38^{\circ}$  C
- WBC  $> 10,000$  or  $< 3,000$  per cubic millimeter
- Urgency
- Frequency
- Dysuria
- Suprapubic tenderness

AND:

- Positive urine culture ( $\geq 100,000$  microorganisms per cm<sup>3</sup> of urine with no more than two species of microorganisms)

OR:

- At least two of the following signs or symptoms with no other recognized cause:
- Fever  $\geq 38^{\circ}$  C
- WBC  $> 10,000$  or  $< 3,000$  per cubic millimeter
- Urgency
- Frequency
- Dysuria
- Suprapubic tenderness

AND at least one of the following:

- Positive dipstick for leukocyte esterase and/or nitrate
- Pyuria (urine specimen with  $> 10$  WBC/mm<sup>3</sup> or  $> 3$  WBC/high power field or unspun urine)
- Organisms seen on Gram stain of unspun urine
- At least two urine cultures with repeated isolation of the same unopathogen (gram-negative bacteria or *S. saprophyticus*) with  $\geq 10^2$  colonies/ml in nonvoided specimens
- $\leq 10^5$  colonies/ml of a single uopathogen (gram-negative bacteria or *S. saprophyticus*) in a patient being treated with an effective antimicrobial agent for a urinary tract infection
- Physician diagnosis of a urinary tract infection
- Physician institutes appropriate therapy for a urinary tract infection

Excludes asymptomatic bacteriuria and "other" UTIs that are more like deep space infections of the urinary tract.

**Unplanned admission to ICU:**

**INCLUDE:**

- Patients admitted to the ICU after initial transfer to the floor.
- Patients with an unplanned return to the ICU after initial ICU discharge.

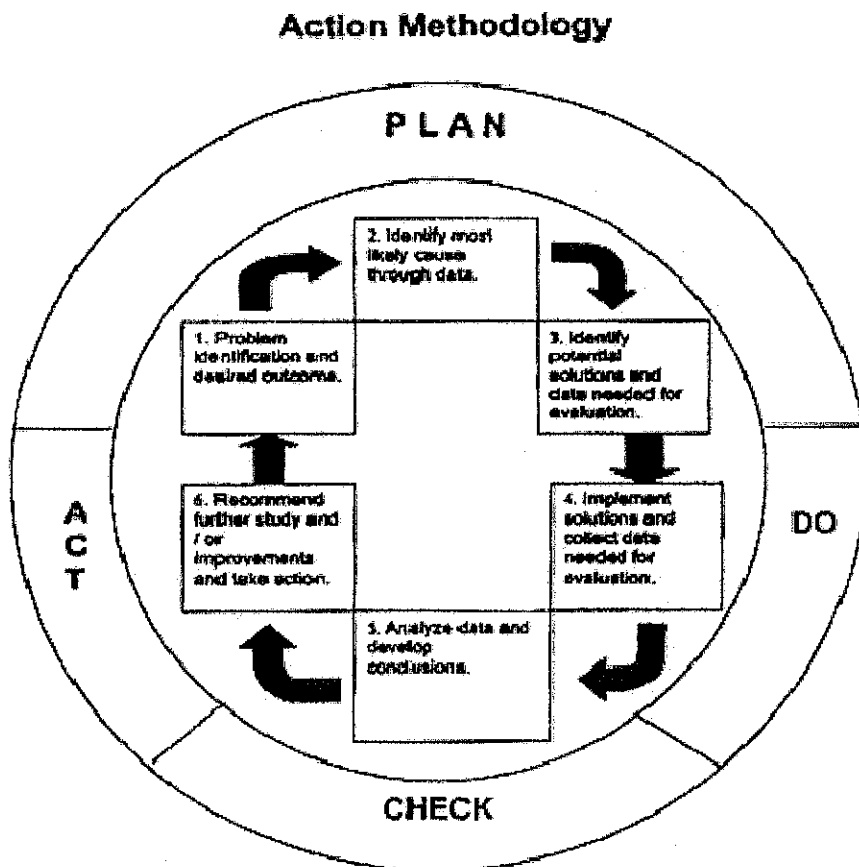
**EXCLUDE:**

- Patients in which ICU care was required for postoperative care of a planned surgical procedure

**Unplanned intubation:** Patient requires placement of an endotracheal tube and mechanical or assisted ventilation because of the onset of respiratory or cardiac failure manifested by severe respiratory distress, hypoxia, hypercarbia, or respiratory acidosis. In patients who were intubated in the field or Emergency Department, or those intubated for surgery, unplanned intubation occurs if they require reintubation > 24 hours after extubation.

**Unplanned return to the OR:** Unplanned return to the operating room after initial operation management for a similar or related previous procedure.

**Attachment #5 PDCA Methodology**



## References

1. National Trauma Data Dictionary (2015), National Trauma Data Bank American College of Surgeons.
2. Indiana Trauma Data Dictionary (2015). Indiana Trauma Registry.
3. Resources for Optimal Care of the Injured Patient. ACS Committee on Trauma: 2014
4. Trauma Performance Improvement Reference Manual. PI Subcommittee of the ACS. January 2002
5. Trauma Outcomes and Performance Improvement (TOPIC) Manual. Society of Trauma Nurses. 2014

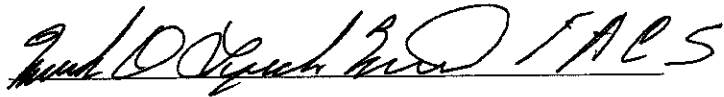
# UNION HOSPITAL

A Union Health partner

The Trauma Operational Process Performance Improvement (TOPPI) Committee meets a minimum of quarterly with a multidisciplinary membership that represents all phases of care provided to the injured patient. Membership of this committee includes the following:

- Trauma Medical Director
- Trauma Program Manager
- Nurse Manager, Emergency Department
- Director, Respiratory Therapy
- Emergency Medicine-Trauma Liaison
- Director, Operating Room
- Director, ICU
- Manager, Pathology & Laboratory
- Trauma Registrar
- Director, Imaging
- Director, EMS & Risk Management
- Director, Medical Surgical Services
- Manager, Quality
- General Surgeons
- Trauma Liaisons

Additional members are invited on an ad hoc basis.



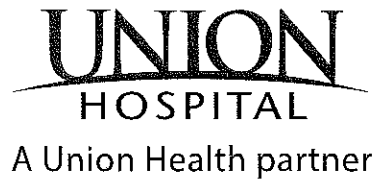
Mark O. Lynch, MD FACS  
Trauma Medical Director



Kelly J Mills RN BSN CEN  
Trauma Program Manager

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A NEW DAWN IN HEALTHCARE





The Trauma Peer Review Committee (TPRC) meets a minimum of quarterly with a multidisciplinary membership that represents all phases of care provided to the injured patient. Membership of this committee includes the following:

- Trauma Medical Director
- Trauma Program Manager
- General Surgeons taking trauma call
- Anesthesia Liaison
- Orthopedic Liaison
- Neurosurgery Liaison
- Critical Care Liaison
- Emergency Medicine Liaison

Additional members are invited on an ad hoc basis.

Mark O. Lynch, MD FACS  
Trauma Medical Director

Kelly J Mills RN BSN CEN  
Trauma Program Manager

Level III - Application  
Peer Attendance

Total Number of Trauma Peer Review Committee meetings held last year:	Committee Member Name	Specialty Represented	9/3/2015	10/1/2015	11/5/2015	12/3/2015	Overall Attendance	Overall Attendance Percentage
4	Mark Lynch	Trauma Surgeon/TMD	X	X	X	X	4	100%
	Kelly Mills	Trauma Program Manager	X	X	X	X	4	100%
	Misty Wyrick	Trauma Registrar	X	X	X	X	4	100%
	Rebecca Lynch	Trauma Surgeon	X	X	X		3	75%
	Anita Toussi	ED Liaison	X		X	X	3	75%
	Larry Dultz	Pulm/Critical Care Liaison	X	X	X	X	4	100%
	James Griggs	Anesthesia Liaison	X		X		2	50%
	Erick Stephanian	Neurosurgeon Liaison	X	X			2	50%
	Pardeep Narotam	Neurosurgeon	X				1	25%
	Jim Backstrom	Radiology Liaison	X	X	X	X	4	100%
	Sami Jaafar	Orthopedics Liaison		X	X	X	3	75%
	Stephen Fern	Orthopedics	X				1	25%
	Elizabeth Schmidt	Surgeon -Not on Trauma Call			X	X	2	50%
	Brett Guinn	Surgeon-Began Trauma Call 10/2015			X	X	2	50%
	Vincent Puccia	Surgeon-Began Trauma Call 10/2015			X	X	2	50%
	Christopher Lueking	Surgeon-Began Trauma Call 10/2015			X	X	2	50%



# Practice Guideline

## Union Hospital Terre Haute Trauma Program

Trauma Manual

Effective Date: 07/2015

**Title:** Trauma Nursing Continuing Education Guidelines

**Purpose:** To define continuing educational guidelines for each unit caring for trauma patients.

**Guideline:**

1. Registered Nurses and ancillary personnel caring for trauma patients have required continuing education addressing the care of the trauma patient.
2. Registered Nurses caring for trauma patients should be current with their educational requirements.
3. The RN and department manager are responsible to ensure that the staff meets the minimum requirements for each unit related to certifications and competencies required by the scope of care for each unit/area (i.e. BLS, ACLS, PALS, TNCC.)

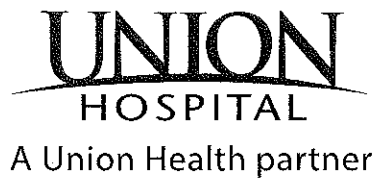
### Continuing Education

Department	Requirement
Critical Care Unit (2EC)	6 Trauma Webinervice annually Complete competencies annually BLS, ACLS
Emergency Department	6 Trauma Webinervice annually Complete competencies annually BLS, ACLS, PALS, TNCC
Surgery/PACU	6 Trauma Webinervice annually Complete competencies annually BLS, ACLS, PALS-PACU only
Ortho/Neuro (3EA)	6 Trauma Webinervice annually Complete competencies annually BLS
Surgical Care (3EC)	6 Trauma Webinervice annually Complete skills competency annually BLS
Float RN's	6 Trauma Webinervice annually Complete competencies annually BLS

**References:**

Trauma Team Education Plan (2015). Deaconess Trauma Services

REVIEWED DATE	REVISED DATE
07/2015 TOPPI	



## Nurse Credentialing

<b><u>Intensive Care Unit:</u></b>	<b><u>Percentage% Completed</u></b>
BLS on hire	100%
ACLS within 60 days of hire	100%
Critical Care Class within 90 days of hire	100%
Hemodynamics Class within 90 days of hire	100%
Trauma Nurse Continuing Education within 6 months Of hire, then 6 courses annually	100%
CCRN (not required, encouraged)	5%

### **Emergency Department:**

BLS on hire	100%
ACLS within 60 days of hire	98%
PALS within 6 months of hire	98%
TNCC within 1 year of hire	95%
Trauma Nurse Continuing Education within 6 months Of hire, then 6 courses annually	100%
CEN (Not required, encouraged)	8%
CCRN (Not required)	1%

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A Union Health partner

### Commitment of the Governing Body

Union Hospital/Union Health System's governing body is committed to becoming an established Level III Trauma Center and to pursue verification by the American College of Surgeons within one (1) year of submitting the "in the ACS verification process" application and to achieve ACS verification within two (2) years of the granting of "in the ACS Verification process" status.

Further, Union Hospital/Union Health System recognizes that if verification is not pursued within one (1) year of this application and/or does not achieve ACS verification within two (2) years of the granting of "in the ACS verification process" status that the hospital's "in the ACS verification process" status will immediately be revoked, become null and void and have no effect whatsoever.

Adopted the 15th day of June, 2015

A handwritten signature in cursive script, reading "Melly B. Callahan".

Chairman, Board of Directors

Union Hospital/Union Health System

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### **Commitment of the Medical Staff**

Union Hospital medical staff are committed to becoming an established Level III Trauma Center and to pursue verification by the American College of Surgeons within one (1) year of submitting the "in the ACS verification process" application and to achieve ACS verification within two (2) years of the granting of "in the ACS Verification process" status.

Further, Union Hospital recognizes that if verification is not pursued within one (1) year of this application and/or does not achieve ACS verification within two (2) years of the granting of "in the ACS verification process" status that the hospital's "in the ACS verification process" status will immediately be revoked, become null and void and have no effect whatsoever.

Adopted the 6<sup>th</sup> day of July, 2015

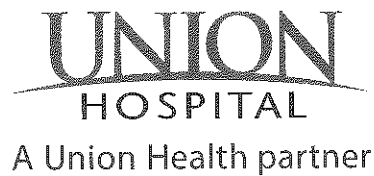
On Behalf for the Executive Committee of the Medical Staff

A handwritten signature in black ink, appearing to read "David Southwick", written over a horizontal line.

David Southwick, D.O. - Chief of Staff

Union Hospital, Terre Haute, IN





1/8/2016

Indiana Department of Homeland Security

EMS Certifications, E239, IGC-S

302 W. Washington Street

Indianapolis, IN 46204-2739

Indiana State Trauma Care Committee:

Subject: Application for Hospital to be Designated "In the ACS Verification Process" Level III

Enclosed please find Union Hospital Terre Haute's application for "In the ACS Verification Process" Level III Trauma Center Status. Union Hospital has committed to being designated as a Level III Trauma Center thus providing the necessary resources to care for the injured patient and becoming an integral part of the Indiana State Trauma System.

Please review our application. If you have questions, or we need to provide additional information to facilitate your consideration of our application, please contact Kelly Mills, Director of Trauma at 812-238-4585.

Sincerely,

Kelly Mills RN BSN CEN TCRN

Director of Trauma

Union Hospital

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